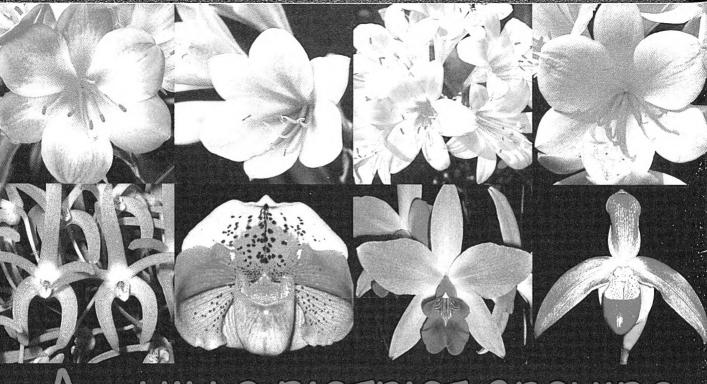
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From the Editor's Desk

Roger Herraman from South Australia has probably seen more variations within the species *Cymbidium canaliculatum* than most native orchid enthusiasts. He has travelled throughout the country studying and photographing plants in the

wild, often during the flowering season. Over the years he has also amassed an impressive live collection of these plants, mostly with historical and location data, with many plants grown from only a few pseudobulbs. The hot and dry summer climate obviously suits these orchids as Roger has grown some outstanding specimens. In this issue, Roger showcases some of the tremendous variation that occurs within this most variable species, plus gives

some tips for successful cultivation.

Albino forms of orchid species have always been of interest to me, with my attention turned to the Australian *Cymbidium* species. We have known about green and white flowered forms of *Cymbidium canaliculatum* for a while, and there have been rumours of similar coloured forms for the other Australian species *Cymbidium madidum* and *Cymbidium suave*. So I set out to investigate these claims and aimed to put pieces of this jigsaw puzzle together. What started out as a short note soon turned into a full scale opus as I gleaned information, sorted fact from fiction, and delved into the history of these plants. I also learned a lot along the way. This is clearly the most comprehensive treatment on albinistic forms of our native *Cymbidium* species and I am pleased to have it published in the *AOR* – Australia's largest (and least expensive) orchid publication.

Still speaking about cymbidiums, the biggest Cymbidium Show for the Year (may as well be called the National Show this year!) is about to be held. The 2012 National Orchid Extravaganza will be held at Dural Recreation Centre at Ellerman Park, 25a Kenthurst Road Round Corner Dural from 10th-12th August 2012. Visit www.ccansw.com.au for more information. A full illustrated show report will appear in the next issue, further confirming our commitment to the

Cymbidium world.

David Jones and Chris French describe a couple of new *Pterostylis* species from Western Australia. These greenhood orchids form an important part of Australia's orchid flora. Apart from thorough descriptions, this paper also features line drawings and superb colour photographs of these deciduous terrestrials. We are pleased to publish their taxonomic work in the *AOR*, the leading publication as it relates to Australian native orchids and their hybrids.

I am saddened to report the recent passing of Robert Friend, author of *Orchids in Your Garden*. Just before his passing, Robert emailed me an article on his favourite orchids, which appears in this issue.

I have just returned from a brief sojourn to California, where I presented a paper on "The World of Bulbophyllum Species" at the Orchid Digest's Speakers Day, held at the Huntington Botanic Gardens. The highlight of my visit was the honour of being presented with the "Orchid Digest Medal" for 2012 from Professor Harold Koopowitz, who is revered internationally for his knowledge and writings on many plant groups including tropical slipper orchids (especially Paphiopedilum), clivias and daffodils. For me to receive international recognition for my work to date promoting orchids was most humbling.

David Banks Australian Orchid Review david@hillsdistrictorchids.com

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Cover Shot

Cymbidium Serhan's Passion 'Marion' FCC/AOC-NSW 2005 was Champion Cymbidium at the 2011 St Ives Orchid Fair. Hybrid between Lancashire Khan and Blazing Fury. Grown and registered by George Serhan, photo © Bill Dobson.







Having collected and grown this species for more than 35 years, I never cease to be amazed at the endless variations it offers in flower shape, size, colour and markings.

Cymbidium canaliculatum is found across eastern and northern Australia. From as far south as the upper Hunter Valley in New South Wales, northward to almost the tip of Cape York Peninsula and westerly across the top of Northern Territory and on into the Kimberley area of northern Western Australia to as far south as Broome. It must be Australia's most widely distributed epiphytic orchid.

Having such a vast geographical range, it is little wonder the species varies so much. Flowers may range in colour from very pale lime-green with fine spotting to dark chocolate brown with distinct pale margins around petals and sepals. There are also the so-called "sparkesii" types with their solid red/black coloured flowers and the albino or "album" forms.

Generally plants found in the southern part of the habitat tend to flower paler in

colour than their northern counterparts but there are always exceptions. I have found the Northern Territory and Western Australian clones to be much smaller in plant and flower size with colours about mid-range.

Cymbidium canaliculatum is a relatively dry growing orchid. It is almost always found on the western slopes and plains of the Great Dividing Range where annual rainfall is considerably less than the more humid eastern seaboard. Exceptions to this which I have observed are the upper Hunter Valley in New South Wales and in the vicinity of Cooktown in far North Queensland.

Plants may be growing in close proximity to one another (on trees a few metres apart), yet display flowers that are vastly different. Flowering time in their natural habitat is towards the end of the 'dry season', about mid September to late October.

Some of the palest coloured flowers I have seen are from plants in the Pilliga Scrub area west of Narrabri in New South Wales where they are mainly found growing on Australian cypress trees (*Callitris glaucophylla*). Also the area north of Inverell towards the Queensland border has plants which flower with very pale green petals and sepals and a fine brown 'dusting' of spots. However, within these areas the more commonly coloured flowers still abound.

Further inland plants tend to produce more heavily spotted flowers. Areas west of Moree towards Walgett and down to Lightning Ridge (all in New South Wales) have plants flowering towards a more solid brown with very little or no green colouration.

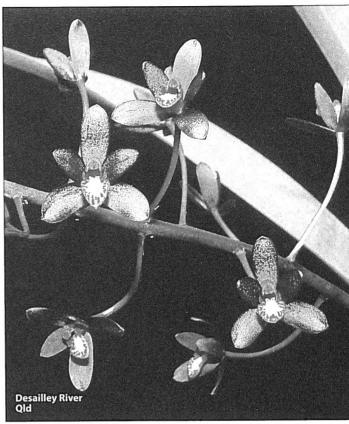
Travelling north through the Charleville and Alpha areas in central Queensland and on through the coalfields region towards Charters Towers, the vast majority of plants flower a more consistent brown with a fine cream to white margin around the floral parts. These are often referred to as the "marginatum" type. This variety can

also be seen further northwards along the Gulf Development Road and as far west as Hughenden and towards the south-western slopes of the Atherton Tableland. Cape York Peninsula plants have many variations in colour. The southern portion is home to the redblack flowering "sparkesii" clones while further north the "marginatum" form predominates.

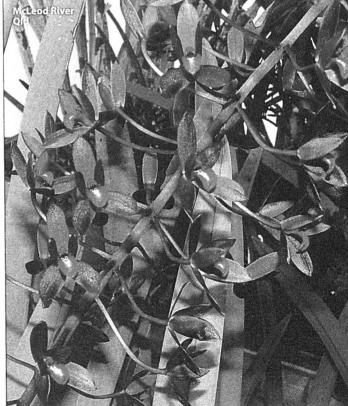
The so-called "sparkesii" clones (i.e. solid red/black with a white spotted labellum) are confined to a relatively small geographical range in the areas west and north of the Atherton Tableland in far north Queensland. However, this region also supports the brown "marginatum" types as well as an occasional album type. Occasionally plants which could be classed within this group occur outside of the general area. True "sparkesii" plants are much larger in bulb and leaf size than the other forms and have inflorescences occasionally up to a metre in length. Flower size probably a little smaller than other forms.











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The albino or 'album' varieties are found sparingly throughout the range of the species. These clones have been observed in such areas as Boggabri, New South Wales and in locations throughout Queensland including, Toowoomba (Darling Downs), Cracow, Nebo, Georgetown and Laura and Lakefield in southern Cape York Peninsula.

In central Queensland, *Cymbidium canaliculatum* can be found west of Blackall in very dry pastoral land approximately 600 kilometres inland from the coast. These plants are small with similarly small flowers reflecting the harsh conditions in which they grow.

Some of the most attractive clones I have observed have been along the Leichardt Highway and the Suttor Development Road in central Queensland. These plants usually produce heavily spotted flowers in the mid to dark brown colour range with white labellums. Some areas north of Toowoomba also have very appealing clones.

Cultivation of *Cymbidium canaliculatum* here in Adelaide, South Australia is comparatively easy provided a few simple rules are observed. Plants need to be kept very dry from completion of new seasons growth to the time when flower spikes are about half developed. This equates to approx. mid April to about early October for me. My plants receive **NO water whatsoever** during this period. Pseudobulbs rarely shrivel as there is generally enough moisture in the air during these cooler months to keep them plump. Flowering time in Adelaide is throughout late October, November with a few plants still blooming up until Christmas.

Another practice which I have always adhered to is, when dividing large plants, to always remove almost all of the old root system. This then allows the divisions to adapt to the fresh potting medium with a brand new root system. Roots will grow very quickly once potted and the plant will be fully established within a couple of months or so. Re-potting and dividing is carried out immediately after flowering has finished.



Above: Typical habitat Lava Plains Qld

During the growing season my plants are watered once a week only, unless we have severely hot weather (40°C+) in which case I will give the growing area a mid-week splash to cool them down. Very dilute fertiliser is applied during watering. I find that plants grow and flower much better if hung above head level rather than benched. There is no extra shading over my polycarbonate clad growing house which offers about 40% shade to the plants. The growing area experiences temperature extremes between 5°C and up to 46°C. I have no heating or cooling facilities installed, apart from a ceiling fan for extra air movement.

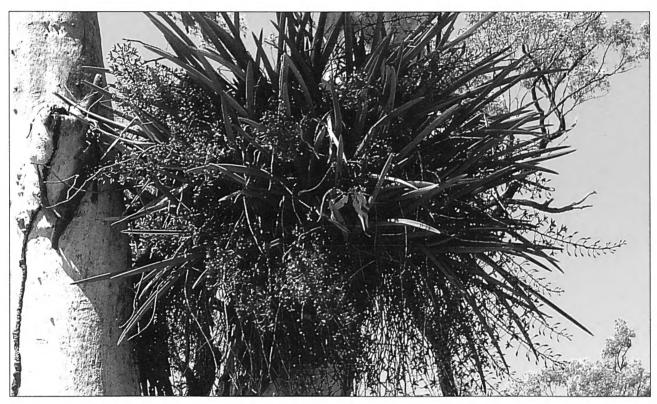
Because the plants are watered much less than most other orchids, the potting medium remains viable for longer, hence repotting and dividing is only carried out when the plant fills the pot. Most of my plants remain undisturbed in their pots for about four or five years.

Potting medium can be almost anything provided it is coarse and very free draining. I use a mix of medium pinebark, diatomite and river gravel with a little crushed dolomite and eucalypt mulch. Pests and diseases are minimal (watch out for scale and/or mealy bug) with this species and these can easily be dealt with using the appropriate sprays.

Don't be afraid to try *Cymbidium canaliculatum*. It will reward you many times over with its cascading spikes of small but extremely colourful flowers in a variety of patterns. A plant in a 150 mm pot with 6 to 8 spikes with up to 40 flowers each is indeed a charming sight.

But always remember to go easy with the watering. A truly wonderful orchid.

Roger Herraman Adelaide, South Australia Email: herraman@iimetro.com.au



Above: Blackbraes NP Qld

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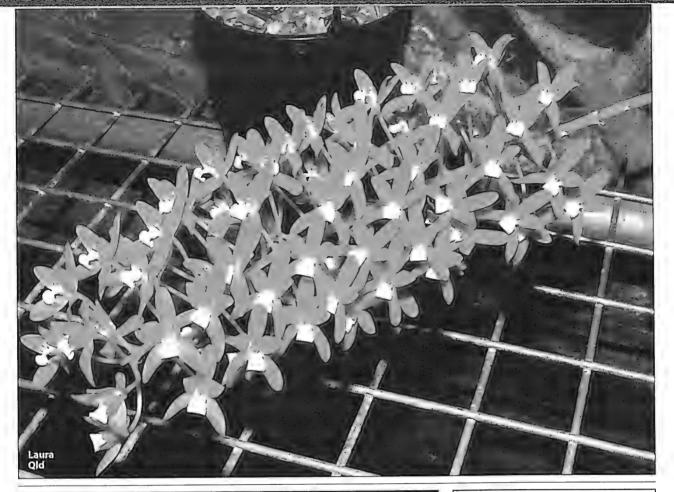
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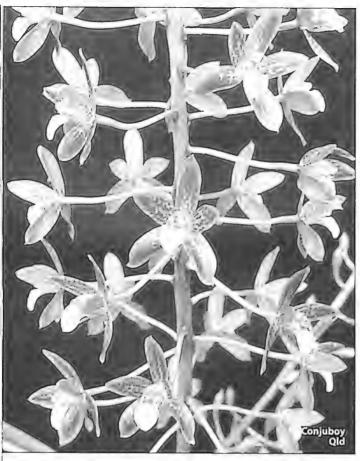
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Below: Mulligan Highway Qld (Photo: D. Banks)





Below: King River Qld











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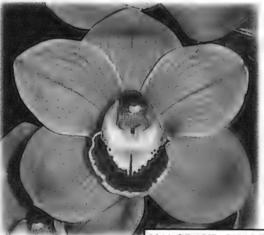
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"Albino" Forms of the Australian *Cymbidium* Species, including a new taxon in the *Cymbidium canaliculatum* R.Br. complex

by David P. Banks

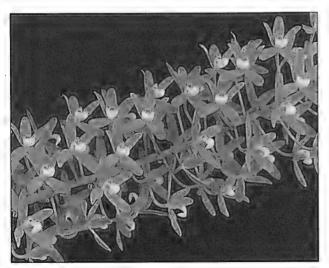
Summary

In this paper, the status of albinistic forms in the three Australian Cymbidium species – C. canaliculatum, C. madidum and C. suave is discussed using historical records and verified accounts. A new colour form of Cymbidium canaliculatum is formally described. Two reported sightings of a putative natural hybrid between C. madidum and C. suave are also documented for the first time.

Introduction

Unusual colour forms have always attracted orchid growers, and have become highly sought after with the more horticulturally attractive species. Albino forms (or loosely "white flowered") examples have also proved very high in demand, and often reflected in their higher price. They probably reach their greatest interest within *Paphiopedilum*, the genus of Asiatic slipper orchids.

The term "albino" is often used incorrectly when applied to orchid flowers. Most agree that we are actually talking about anthocyanin-free forms. Anthocyanins are water-soluble pigments that may appear red, purple, or blue depending on the pH. When applied to orchids, these alba/album/albus flower forms should essentially have white flowers. This is the case within some species, but not others, whereas most nurserymen have a relaxed view and accept green and white flowers as being "albino" in orchid flowers where the normal colour form includes red/purple/blue pigments.





Above: Front Cover of March 1984 AOR announcing the "very rare green form of **Cymbidium canaliculatum**"

Australia has three indigenous and endemic *Cymbidium* species. Indeed I find it surprising that the hugely widespread and variable *Cymbidium canaliculatum* did not make it across the Torres Strait to Papua New Guinea – unlike a number of *Dendrobium* species that occur in both countries and share a similar habitat.

Left:Spike habit of Kevin McFarlane's plant of **Cymbidium canaliculatum forma viridiflorum**

Cymbidium canaliculatum

Cymbidium canaliculatum has Australia's widest distribution of an epiphytic orchid species. Throughout its range it expresses itself through an amazing range of colours and patterning, to the point where a growing number of specialist collections are devoted to cultivating this semi-succulent and essentially dry-growing epiphytic species.



Above: Distribution of **Cymbidium canaliculatum** (map prepared by David Banks)

It is found from the Upper Hunter River Valley in New South Wales. north through much of Queensland (where it mostly occurs west of the Great Dividing Range) - to Cape York, across the top part of the Northern Territory over to the Kimberley Region northern Western Australia. 1936 Ĭn (AOR 1[3]:11), the Rev. H.M.R. Rupp made an anecdotal "reliable

report of its occurrence on the Lachlan (River), near Forbes". If confirmed, this would be its southern limit of distribution. I am not sure which exact location takes credit for being "furthest inland". For New South Wales (well only just south of the NSW/Old border!), a record from New Angledool. north-west of Lightning Ridge (Narran-Warrambool Reserve) may be hard to beat, being some 600 kilometres in a straight line from the coast. However in central Queensland, it can be found west of Blackall just over 600 kilometres inland from the coast. Many years ago, the late Len Lawler from Tolga (near Atherton, Qld) told Roger Herraman, a very keen orchid enthusiast from South Australia, that he had seen "canics" as far west as Yaraka, south-west of Blackall in central Queensland. If this is correct, then that would have to be the most westerly location (700 km from coast). Roger has been on the road from Blackall to Yaraka but only saw a few plants within 20 km of Blackall. Judging by the country out there (some of the most inhospitable country he had ever been through), he was surprised that even a gum tree can survive let alone a "canic"!



Above and right: Kevin McFarlane's 1977 slide of his **Cymbidium canaliculatum forma viridiflorum**

In 1934, Rupp in the *Proceedings of the Linnean Society of New South Wales* included a note concerning several reports of an "albino variant of *C. canaliculatum*". No other details are given. This is interesting however, as Rupp described a number of different colour morphs as forms (forma) or as varieties (var.). He published line drawings of individual flowers of these various forms in the early editions of the *Australian Orchid Review* in July 1936 and September 1939. These varieties and forms were subsequently relegated to synonymy. Interestingly, about a decade later in his 1943 book *The Orchids of New South Wales*, he makes no mention of this "albino variant". Admittedly, this book did not cover examples from Queensland or other states/territories.

In September 1942 (AOR 7[3]:40), W.H. Nicholls wrote a short article entitled *Three Interesting Orchids (New Varieties of old-established Forms*). He describes *Cymbidium canaliculatum* var. *barrettii* from a plant collected from "Groote Eylandt, Northern Territory" by a Mr. Charles Barrett. The description included: "Flowers numerous, and similar in form to those of the type, but in colour, wholly pale greenish-yellow, the labellum white. In some flowers the outer segments (sepals) are marked, very neatly, on the reverse, at the base, with red." It then stated that "Mr. Barrett's plant (a small specimen) flowered in Melbourne during April 1941. The new variety represents a most interesting addition to the forms already dealt with by the Rev. H.M.R. Rupp, by reason of the exquisitely soft colouring of the flowers…"

Two things are obvious here. One is we are dealing with a single collection that was lodged in the Melbourne Herbarium, yet has not since been located. Secondly, by stating that the flower had neat, red markings on the back of "some of the flowers" precludes it from being albinistic. I have never seen such a unique colour combination, and neither have my colleagues and correspondents.

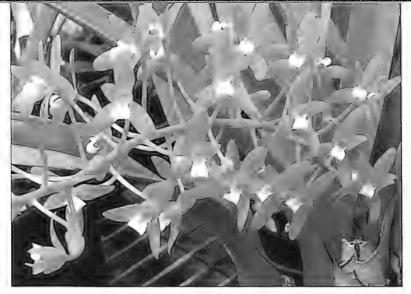
The double-page Plate number 447 in The Complete Edition of *Orchids of Australia* by W.H. Nicholls (published in 1969) depicts *Cymbidium canaliculatum*. Of interest is the date of the illustration, shown as W.H.N. 1932-40. (We do not know when Mr. Barrett collected and/or first bloomed his plant.) The colour illustration shows a portion of a sterile plant with pseudobulbs and foliage, a raceme of flowers of a typical spotted form, plus various floral parts dissected and magnified.



However in the centre of this plate is the front and reverse views of the flower that perfectly matches his description of var. barrettii. This shows a reduced reddish bract at the base of the pedicel and four distinct small dots of red on the back of the sepals. The front view suggests an albinistic form, yet the reverse view clearly shows the presence of anthocyanins.

Alick Dockrill in his 1969 opus Australian Indigenous Orchids, also emphasised the wide colour range expressed in this species, and refers to a "totally green" form (which probably had a pure white labellum?). No further information is given in his 1992 revised edition.

Albino forms of this species were essentially unconfirmed until internationally respected orchid hybridist and elite grower, the late Kevin McFarlane of Cairns, exhibited a pure green form of Cymbidium canaliculatum (with a contrasting pure white labellum) at the Eighth Australian Orchid Conference held in Townsville in September 1983. He had flowered this particular colour form every year since 1978. This stunning plant was featured on the front cover of the March 1984 issue of the Australian Orchid Review, with the caption "The very rare green form of Cymbidium canaliculatum". The question was asked, "Is it a one-off?" in the title of an article by Gordon Hansen that appeared in the same edition [49(1):42]. It was talked about as "one of the rarest in the world". Apparently this green-flowered plant was growing with another "dark form" - possibly one of the so-called "var. sparkesii". The various colour forms do tend to blend into one another throughout its range. No detail of its provenance was published, but (due to the floral shape and habit of inflorescence) it can be confidently assumed as being a North Queensland example. Kevin McFarlane. decades ago, told me that it was from "somewhere between Cairns and Cooktown". I have since ascertained from his daughter that it was most likely from the Mount Carbine region. Attempts to self pollinate this plant were initially unsuccessful, with seed capsules aborting after only two months. I don't believe this McFarlane plant was ever given a clonal or cultivar name. In the early 1990s Karen McFarlane (Kevin's daughter) successfully selfed her father's plant, but it didn't yield much seed and only two small flasks of about half a dozen seedlings each was the result. Roger Herraman nurtured two of these slow growing seedlings to flowering, and the individual blooms were almost identical to the parent plant, the only difference being in the inflorescence habit and arrangement.



Above: Cymbidium canaliculatum forma viridiflorum.

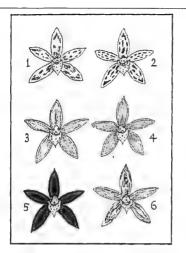
One of the seedlings from Mount Carbine, North Queensland (plant & photo: Roger Herraman)



Above:
Cymbidium canaliculatum
forma viridiflorum.
The second of the McFarlane
seedlings to flower from
the original plant from
Mount Carbine, North Queensland
(plant & photo: Roger Herraman)



Cymbidium canaliculatum
forma viridiflorum.
Note the pure white labellum and
green callus ridges, selfing of
plant from Mount Carbine,
North Queensland
(plant & photo: Roger Herraman)

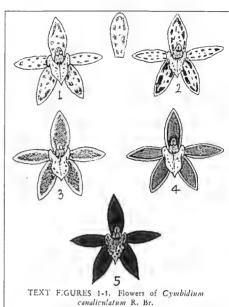


CYMBIDIUM CANALICULATUM, R.Br.

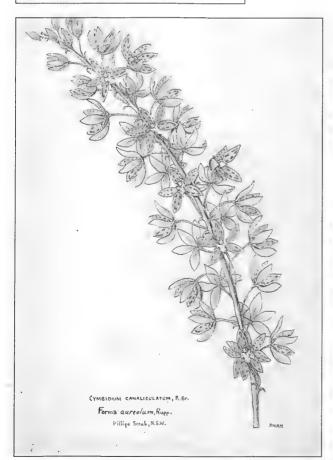
Flowers from the front, to illustrate the classification. 1, type forma inconstans; 2, type, forma aureolum; 3, var. marginatum, forma fuscum; 4, var. marginatum, forma purpurascens; 5, var. Sparkesii; 6, an intermediate between 1 and 3.

Left: Line drawing of six different colour forms of Cymbidium canaliculatum by H.M.R. Rupp (AOR 1[3]:11), July-September 1936

Right:
Line drawing of five
different colour forms of
Cymbidium canaliculatum
by H.M.R. Rupp
(AOR 4[3]:83), September
1939. They appear to be
stencilled copies, with the
different markings and
shades later "coloured in"



1. Robert Brown's Type—Forma inconstans. 2. Forma anreolum. 3. Var. marginatum—Forma fuscum. 4. Forma purpurascens. 5. Var. Sparkesii
Drawings by H. M. R. Rupp.



Above: One of Rupp's crayon sketches of *Cymbidium canaliculatum* depicting one of the colour forms he named in 1934 as "*Cymbidium canaliculatum* forma *aureolum*". This was drawn off a plant from the Pilliga Scrub, NSW. Handwritten is "note abnormal flower at base". (Reproduced from *The Orchid Man* by Lionel Gilbert, Kangaroo Press 1992)



Below: Plate Number 447 by W.H. Nicholls of *Cymbidium canaliculatum*. In the centre of this plate is the front and reverse views of the flower that perfectly matches his description of var. *barrettii*. (Reproduced from The Complete Edition of *Orchids of Australia* by W.H. Nicholls, Thomas Nelson 1969)

Interestingly Hansen's discussion included "Several clones which produce white flowers are known, including one at the D'Bush Nursery on the Atherton Tableland. But a pure green form is unique." Despite such reports, I have never seen evidence of a "white flowered" form of *Cymbidium canaliculatum*, and personally seriously doubt its existence. However more on this 'D'Bush' plant later.

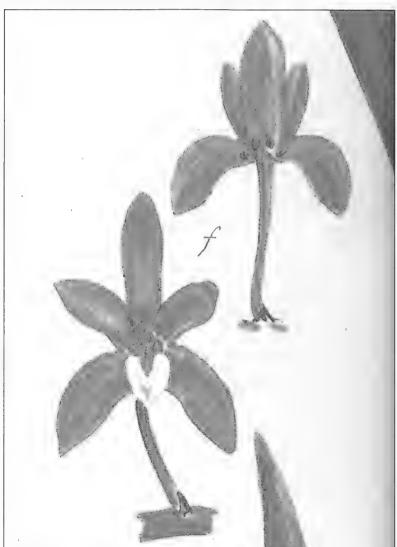
Gordon Hansen's article generated more discussion in the next issue of the *AOR*. On page 127 of the June 1984 issue, John Woolf of Toowoomba, Queensland talks about seven different clones found in the Darling Downs region, dispelling the myth that this was indeed a one-off. The original find was from Crows Nest (40km north of Toowoomba). A piece of this plant was donated to the Darling Downs Group of ANOS to be tissue-cultured, and indeed Nicky Zurcher from South Australia successfully mericloned this "alba form". Many of these mericlones were sold, yet John lamented that "some difficulty was experienced in establishing the mericlones". They decided on the tissue-culture "after years of fruitless selfing and sibling crossing". This was essentially done to share plants around the members of the local native orchid society. As more plants were produced than were required

locally, a letter was sent to all ANOS Groups Australia-wide offering mericlones to members at a modest price.

Nicky told me that they were more difficult to clone than standard Cymbidiums, as they just wanted to develop in the flask as tall grassy plants without developing a pseudobulb. Deflasking proved difficult for most growers and there was a high mortality rate. I wonder, almost three decades later, how many of those original mericlones are still in cultivation. Bill Olsen, a Past President of ANOS Sydney Group, grew one for many years and flowered it regularly, but I have not seen it in recent times. I photographed Bill's plant in the days of slide film in the mid 1990s.

Woolf provided the locations for the other six clones that he knew of, "one at Warwick, three at Chinchilla, one at Carnarvon and another at Crows Nest". I wonder if the Carnarvon reference may have been Carnarvon Gorge?

In that same June 1984 issue of the AOR, Rob Manning from Perth, Western Australia talks about a large-flowered yellow form from near Charters Towers in North Queensland that he saw in 1979-80, but this had a "red blotch on the labellum". I am assuming there were no spots or markings on the tepals.



Left: Close-up detail of the W.H. Nicholls illustration matching his **Cymbidium canaliculatum var. barrettii**. That name was however not mentioned in his opus. Note the red dots behind the sepals and reduced reddish bracts. (Reproduced from The Complete Edition of *Orchids of Australia* by W.H. Nicholls, Thomas Nelson 1969)

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Now back to that 'D'Bush' plant...

In September 1995, E. & S. Reilly gained a Highly Commended Certificate of 77.6 points through the Oueensland Orchid Society, plus an Award of Distinction (with both awards ratified by the Australian Orchid Council) for a plantawarded as Cymbidium canaliculatum var. alba 'D'Bush' HCC-AD/AOC-OOS 1995. This plant was recorded as having vellow-green segments, with a white labellum. There were two inflorescences. one with 41 flowers (and 12 buds) the other 25 flowers (and 16 buds). The individual blooms were 32mm tall and 25mm wide. The nomenclature used for this award should have been the term album (not alba) due to the ending of the generic name. I believe the term forma to be the most botanically correct (as opposed to "variety"), as we are dealing with a distinct and random colour form on an individual plant, not a botanical variety or population of similar looking plants. More on the taxonomy soon.

Again a pure white form eludes us, as this was obviously another greenish form with a white labellum. Indeed, if a white flowered form existed, great efforts would have been made to have such a find botanically documented and photographed.

In recent times, a number of other pure green to vellow-green flowered plants have been discovered and some of these have also entered cultivation. all with pure white lips. Most of these "albino" forms of Cymbidium canaliculatum have originated from Queensland. The Darling Downs forms, as discussed by John Woolf, are albinistic forms of the typical spotted forms that occur in that region, whilst those from North Queensland are green-flowered examples of what generally are deep maroon flowers. I have heard of "yellow forms" from both the Northern Territory and from north-west Western Australia, but I believe they also have typical labellum markings, plus some faint spotting on the tepals.

Roger Herraman told me he has personally found six different albino clones in all, five in Queensland and one near Boggabri, New South Wales. Some of these are now also in cultivation. Roger reminded me that the actual plant colour of these albino forms is of a paler green whereas normal coloured examples tend to have a degree of purple (anthocyanin) staining on the new growths. However it would still take a very keen and discerning eye to confidently identify such a plant out of bloom.

John Roberts also mentioned to me a plant discovered by the late Ralph Crane in 1986 from west of Mitchell, Oueensland, Ralph was a keen bushman and orchidologist, who knew his native orchids. This Mitchell specimen has been confirmed by David Jones, retired senior botanist and scientific researcher at the CSIRO and Australian National Botanic Gardens, Canberra, It was described by David as a "lovely green canaliculatum with a white labellum". Mark Clements subsequently provided photographs of the herbarium specimen of this plant that is held in the National Herbarium (CANB). This is the specimen that will become the TYPE of this colour form. In the early 1990s, David Jones also found a similar looking one growing on a Callitris

in the Pilliga Scrub near Narrabri NSW, but no material was collected. It was found near the type locality for the locally common but restricted cycad Macrozamia glaucophylla.

At least we do know that "albino" forms indeed exist in Cymbidium canaliculatum, expressed as anthocyaninfree green flowers with pure white labellums. A unique form from Laura in North Queensland opens a yellowishgreen yet ages to a bright yellow to gold, with a pure white labellum. This plant was originally discovered by Chris Cobb with some of his local colleagues. However the "pure white" flower form still eludes orchid enthusiasts.

There are now seedlings available in flask of this albinistic form. Western Orchids/Laboratories (South Australia) in their Oz Cymbidium Flask List for 2011 list "I135 Cym. canaliculatum alba. Two extremely fine forms crossed together. Lots of flowers, like a bottle brush, long raceme one parent was light green the other was a yellow alba." (Probably the McFarlane F2 seedling crossed with the Laura clone.) Roger Herraman confirms that selfings are rarely successful; however sibling crosses, between unrelated albino forms yield robust seed capsules packed with viable seed. He has supplied Western Orchids with much of their material as seed. As expected, these seed capsules are also green, as they lack anthocyanins, unlike the spotted and dark maroon forms of C. canaliculatum that have much



Above: Cymbidium canaliculatum forma viridiflorum 'D'Bush' HCC-AD/AOC-QOS 1995 (QOS award slide)

purple staining, especially on the ribs of the fruit. This colour is intensified on the side facing the most sunlight, and may appear green on the shaded side, but there is always still a degree of pigment. Depending on the season, the seed capsules generally take 12 months to ripen. It is not uncommon to see flowering plants with last year's fruits. vet to split and release their copious amounts of fine dust-like seed.

Historically, both Rupp and Dockrill briefly mentioned "albino" or "green forms" of Cymbidium canaliculatum. no photographs, drawings, Sadly, herbarium specimens, or even locations can be confirmed. They may have just been hearsay.

I would suggest that this colour form (the Kevin McFarlane plant, first flowered in 1977 - (also the year on the original slides, scanned for this article) was certainly the first such plant to be documented and brought into cultivation and announced to the orchid world six years later, in 1983. It seems that the Darling Downs area of southern Queensland generally has provided the most individual albino plants. Potentially, this colour form may occur anywhere throughout this species vast distribution.

As of 2012, I have established that 18 such wild clones have now been discovered, collected, recorded verified. This is horticulturally an important and popular colour form that is now recognised and established in cultivation. It is now being propagated by seed (and division) and used in various new hybrid combinations.

However this colour form lacks a formal and taxonomically valid name. In some cases the term 'Alba' or 'Album' have been used as cultivar names, that does not allow for the differentiation between different genetic plants of this colour form. The term *album* was considered, but not used as this implies a pure white flower, which is not the case for the 18 different clones that have been documented. The epithet *viridiflorum* was chosen, as it refers to green flowers, consistent with this colour morph.

Taxonomy

Cymbidium canaliculatum R.Br. forma viridiflorum D.P.Banks, forma nov.

Differt a forma typica, sed floribus viridis cum labello albo.

Plant the same as the typical form but flowers green with white labellum.

TYPE: Australia: Queensland; Maranoa District, 7 km W of Mitchell, 1 km N of highway on bank of Maranoa River, 26° 50′S, 147° 54′E, alt. 350m, 2 April 1986, R.Crane 100 (holo CANB!).

Etymology: From the Latin *viridiflorus*, greenflowered, in reference to the colour of the petals and sepals.

Notes: Growing as an epiphyte on flat open plains, Easterly aspect. "Pale green form minus all trace of spotting. Collected from Mrs D. Allen, 'Boringa Downs' property. Single plant of this colour."



Above: Cymbidium canaliculatum forma viridiflorum, one of the mericloned plants originally from Crows Nest, Queensland (plant: Bill Olsen, photo: David Banks)



Right: Cymbidium canaliculatum forma viridiflorum, example from Crows Nest, Queensland,

crows Nest, Queensland, note different shade of green to the more northern examples (plant: Bill Olsen, photo: David Banks)

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#)	Reference/Comments	Year	Location	State
1	"Kevin McFarlane plant" AOR Cover March 1984	1977	Mount Carbine area	Qld.
2	John Woolf – AOR June 1984 (plant later mericloned)	<1984	Crows Nest (#1)	Qld.
3	John Woolf – AOR June 1984	<1984	Warwick	Qld.
4	John Woolf – AOR June 1984	<1984	Chinchilla (#1)	Qld.
5	John Woolf – AOR June 1984	<1984	Chinchilla (#2)	Qld.
6	John Woolf – AOR June 1984	<1984	Chinchilla (#3)	Qld.
7	John Woolf – AOR June 1984	<1984	Carnarvon (Gorge?)	Qld.
8	John Woolf – AOR June 1984	<1984	Crows Nest (#2)	Qld.
9	(Crane) TYPE of <i>C. canaliculatum</i> forma viridiflorum	1986	Mitchell	Qld.
10	David Jones (personal communication) – 1st NSW plant	1991	Pilliga Scrub	NSW
11	'D'Bush' HCC-AD/AOC-QOS 1995	1995	Atherton Tableland (?)	Qld.
12	'Laura Gold' (Chris Cobb) - more yellow than green	2000s	Laura	Qld.
13	Roger Herraman (p.c.)	2000s	Lakefield	Qld.
14	Roger Herraman (p.c.)	2000s	Georgetown	Qld.
15	Roger Herraman (p.c.)	2000s	Nebo	Qld.
16	Roger Herraman (p.c.)	2000s	Cracow	Qld.
17	Roger Herraman (p.c.) - short inflorescences	2000s	west of Toowoomba	Qld.
18	Roger Herraman (p.c.) - 2 nd NSW plant	2000s	Boggabri	NSW

STARTING OUT WITH ORCHIDS

David, L. Jones 2010

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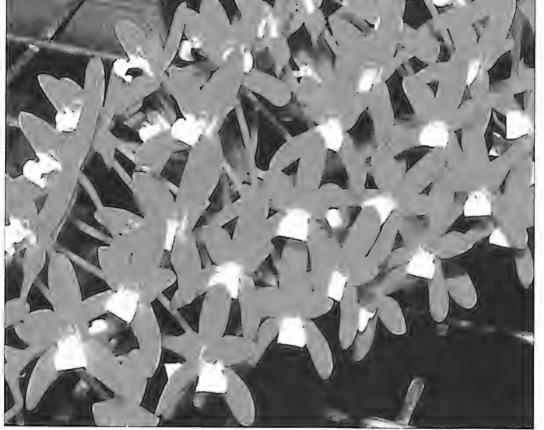
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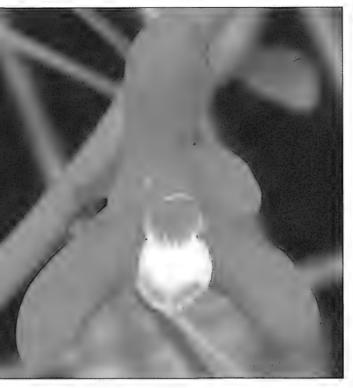




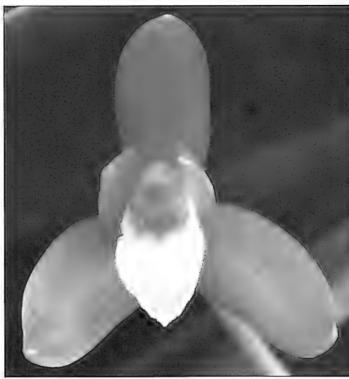
Left:
Cymbidium
canaliculatum
forma viridiflorum
'Laura Gold',
freshly opened
flowers of this
horticulturally
desirable form
from Laura,
North Queensland
(plant & photo:
Roger Herraman)

Below:
Cymbidium
canaliculatum
forma viridiflorum
'Laura Gold',
this clone opens
greenish-yellow
and ages to gold.
From Laura,
North Queensland
(plant: Chris Cobb,
photo: Andrew Locke)





Above left: Cymbidium canaliculatum forma viridiflorum 'Laura Gold', older flower showing the gold tones, from Laura, North Queensland (plant & photo: Roger Herraman)



Above right: Cymbidium canaliculatum forma viridiflorum, example from Lakefield, North Queensland (plant & photo: Roger Herraman)

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david@hillsdistrictorchids.com

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Above: TYPE specimen of *Cymbidium canaliculatum* forma *viridiflorum*, held at the Australian National Herbarium (CANB). Collected by Ralph Crane at Mitchell, Qld in 1986 (*photo: Mark Clements*)

Other varieties and colour forms

We now have a validly published name for this albinistic form, *Cymbidium canaliculatum* forma *viridiflorum*. This naming is probably more significant from a horticultural perspective rather than a botanical one. Whilst this form in flower would be instantly recognised, the same cannot be said with certainly over the numerous forms and varieties that Rupp described, where much variation and intermediates occur within an extremely variable taxon. Also this albinistic form is quite sporadic in its distribution and if you were able to test genetic material of all the specimens listed above we would likely find they were not uniform. (In that some would be anthocyaninfree forms of the typical "spotted" form, whilst others from the north Queensland would be anthocyanin-free forms of the "sparkesii" types, which may be availed formal botanical recognition in the future).

David Jones, who I respect immensely as Australia's preeminent modern botanist, counselled me on the naming of this new form, asking was I going to recognise the other forms that Rupp has named. To which I answered No, simply because I could not confidently identify and define them.

David went on to say:

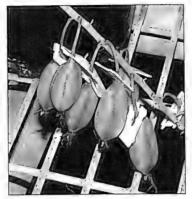
"After seeing the variation in this orchid over much of Australia I decided (while at CSIRO) that there was no way to make sense of the variation involved. And I did look at Rupp's papers. In many cases there are no Types to fall back on and we are forced to rely on the illustrations he included.

Rupp complicated things by recognising two varieties within *C. canaliculatum* (var. *canaliculatum* and var. *marginatum*) and made things even worse by linking his formas to these varieties. Thus he was saying that *C. canaliculatum* var. *marginatum* ranged from Cairns in north Qld (where it occurred as forma *fuscum*) to the Brisbane River (where it occurred as forma *purpurascens*). I would point out that from Cairns to the Brisbane River is a very long haul covering many different ecological habitats.

So what are the features that define *C. canaliculatum* var. *marginatum* and distinguish it from var. *canaliculatum* (and indeed how does he define var. *canaliculatum* and what is its distribution). We have no characters to use and therefore the taxon is impossible to recognise. Furthermore to recognise forma *fuscum* and forma *purpurascens* within *C. canaliculatum* var. *marginatum* is totally meaningless.

And what about *Cymbidium hillii* (which is also a synonym of *C. canaliculatum*) from north Qld but with no Type so far found? I trust I have pointed out some of the difficulties in dealing with the nomenclature and classification of this complex taxon."

Right: Cymbidium canaliculatum forma viridiflorum, this is the photo used as "madidum alba" to market flasks on Australian eBay, which may actually be the 'Laura Gold' cultivar





Left: Seed capsules of **Cymbidium canaliculatum forma viridiflorum** (photo: Roger Herraman)

Below: Seed capsules of a North Queensland dark marcoon "sparkesii" form of Cymbidium canaliculatum (photo: Roger Herraman)



Right: Seed capsules of a spotted form of Cymbidium canaliculatum (photo: Roger Herraman)





Cymbidium madidum

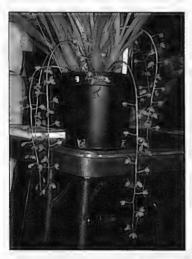
Well known international hybridist, judge, nurseryman, *Cymbidium* guru and orchid identity Andy Easton (from New Horizon Orchids - Selinas, California) first alerted me to an "albino" form of this species a number of years ago. Whilst I have actively looked for such a plant, I have never seen one. Again I would be looking for a plant with green flowers and

Above: Distribution of **Cymbidium madidum** (map prepared by David Banks)

a pure white labellum. I am confident such a plant exists in the bush somewhere.

Cymbidium madidum is species widespread throughout moister habitats in high rainfall areas. It is generally found as an epiphyte in forests and rainforests, but is also found in swampland. It is found from almost the tip of Cape York, south along the Great Dividing Range through Queensland and

into New South Wales to the Yarratt State Forest (in the Manning River catchment), north of Taree.



Left: Plant awarded in USA as Cymbidium madidum var. album 'Mem. Mu-Lan Wu' HCC/AOS 2003 (plant: Buddy F. Mark, photo: Eric Hunt)





In 2003, Buddy F. Mark, from San Francisco, California, USA received a 75 point Highly Commended Certificate for a plant submitted as *Cymbidium madidum* var. *album* 'Mem. Mu-Lan Wu' HCC/AOS 2003. The award description stated, "One hundred eleven flowers and four buds on eight pendent inflorescences; sepals green; petals yellow and green; lip yellow distally, orange centrally; substance firm; texture matte". Eric Hunt took the award photographs.

Now, as we all know, orange is a colour combination of red and yellow. As I mentioned at the beginning of this article, anthocyanins contain red. So by orange being present in the flower, even though it's only a blotch on the labellum, this precludes it from being considered an "albino" form.

As an aside, I was surprised that the clone 'Mem. Mu-Lan Wu' was granted a quality award, as it is horticulturally one of the poorest forms of this wonderful species I have seen. I am sure the term "album" influenced some judges, perhaps due to the issue of rarity.

Now Andy Easton has a better clone that he has bred with, under the name of *Cymbidium madidum* var. *album* 'Darby'. Andy had to reluctantly agree that it wasn't a pure "album" – again due to the pale orange blotch on the labellum. Andy maintains the orange stands out more in the photos than in real life.

Thankfully, not all of these unusual coloured forms of our native *Cymbidium madidum* are in America! Cliff Hutchins from Gympie, Queensland has another plant – that he calls "*madidum alba*", even though this is again incorrect terminology. Again, this plant has that small orange blotch on the lip.

Cliff shared with me the history and photographs of this plant. "A friend phoned me several years ago and asked if he could bring a few flowering plants round for me to look at. Among them was this *madidum*. The story is that many years ago an old lady in the local Gympie Orchid Society had given him this plant when he joined the Society. I can only assume that it came from the local district somewhere as he can't remember who the woman was and my inquiries brought no answers, plus I have not seen another. My plant is a division off his original which I know he will not part with for love or money."

Whatever name you put onto it, Cliff certainly has quite a very special and unique plant, and is the only one I know of in Australia. He had the flowers analysed by scientist Dr. Randall Robinson. Interestingly he noted that "the orange spot on Cliff's madidum kind of just bleed into the surrounding tissue once the pollen cap was removed. It remained in the middle of the labellum and did not approach the edges". Randall did some paper and gas chromotography on the flowers of Cliff's madidum. The studies concluded that the petals and sepals have about equal amounts of Chlorophyll A, Chlorophyll B, a type of Xanthophyll, a type of Flavanoid and a very small amount of a dark orange Carotene. The labella have about equal proportions of a type of Xanthophyll, a type of Flavanoid, a dark orange carotene and very small amounts of Chlorophyll A and B. The strongly senescing flower had a large amount of the dark orange carotene in the labellum. Apparently, Carotenoids are not uncommon in some monocots, particularly Narcissus (Daffodil family).

What surprised me was a comment at the end of the report that stated "there was absolutely no evidence whatsoever of an Anthocyanin. Not even in miniscule proportions."

To muddy the waters, some scientists consider that carotenes (which give orange carrots and *Clivia* flowers their colour) are like a diluted anthocyanin. Personally, I simply don't know enough about the subject, but am happy to share the scientific results.



having this "album" discussion.

Left: Plant named as **Cymbidium madidum var. album 'Darby'** (plant & photo: Andy Easton, New Horizon Orchids)

Right: Example from the Gympie region named as Cymbidium madidum var. album, plant in November 2007 (plant & photo: Cliff Hutchins)





Above far right: The same Gympie region plant named as **Cymbidium** madidum var. album, in November 2010 (plant & photo: Cliff Hutchins)

Randall and Cliff now prefer to classify this plant as a "xanthic alba". It will now be interesting to see how this plant breeds. I still strongly believe that any orange colour in the bloom (whatever chemical it is!) precludes the plant from being called an alba/album/albino. I think we would all agree that if this madidum flower was the same colour orange all over, we would not be

Do I think, or would I call it "var. or forma album"?....No.

Would I call it a "xanthic album"?....Probably Not. However if it was pure yellow (with or without white), without any orange then I would answer Yes.

Cliff has selfed his "Cymbidium madidum forma album" and as he says "if they survive to maturity, time will tell if it is in fact a true alba or not". I believe that Cliff's plant should be tissue cultured, as there would be many orchid growers and gardeners that would happily grow this colour form.

Now will it breed like a "xanthic album"? Before the evidence that Randall presented, I would have said No. However with this new information, and the confusion (in my mind) with this carotene vs anthocyanin thing, I am now not so sure! I am now leaning towards the possibility/probability that a selfing of Cliff's *madidum* will produce a percentage of similar offspring, with the distinct possibility of a small/tiny proportion producing true xanthic albinos, and maybe even some green flowers with pure white labella.

A similar thing was proven years ago by selfing the yellow/green form of the Thai slipper orchid *Paphiopedilum sukhakulii* var. *aureum*, with about a quarter of the seedlings blooming apple green and subsequently described as *Paphiopedilum sukhakulii* var. *album*.

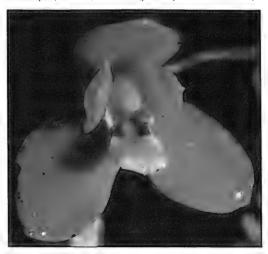
I did see reference to seedling flasks listed on Australian eBay about 18 months ago as *Cymbidium madidum* var. *album*, however they showed an image of a single flower of a green *Cymbidium canaliculatum* forma *viridiflorum*. Again, Western Orchids/Laboratories in their Oz Cymbidium Flask List for 2011 list "K659 *Cym. madidum album* (as *alba*) x self. Selfing of a top pure green alba *madidum*. These should be interesting in their own right but they may also lead to some interesting results if used for breeding". Unfortunately there is no supporting photograph as proof.

There has only been one botanical variety of *C. madidum* formally described, being the variety *leroyi*, previously regarded as the "eastern tropical Queensland variety". In Alick Dockrill's 1969 *Australian Indigenous Orchids* he writes; "The main difference between variety *leroyi* and variety *madidum* is in the different position of the edges of the front lobe of the labellum; in variety *leroyi* they are bent upward to give the lobe a somewhat boat-shaped appearance while in variety *madidum* they are flat or curved downward." In his 1992 revised edition, Dockrill sunk the variety *leroyi* into synonymy (as the differences were minor and not consistent across the species range), treating *C. madidum* in the broad sense as a distinct but variable species.



Above: Floral detail of the Gympie plant named as **Cymbidium madidum var. album**, though not a true *album*, this is a desirable colour form (*plant & photo: Cliff Hutchins*)

Below: A typical coloured form of *Cymbidium madidum*. This is a particularly large flowered and well-shaped example from the Paluma Range, at the southern end of the Wet Tropics, North Queensland (plant & photo: David Banks)



Cymbidium suave

I am confident amongst the tens of thousands of plants of this species in the bush, there would have to be at least one albinistic form out there. Again I would be looking for a plant with green flowers and either a pure white labellum or a white labellum with a distinctive (perhaps darker) green blotch.



Above: Distribution of **Cymbidium suave** (map prepared by David Banks)

Cymbidium suave is found along the East Coast from the Wet Tropics – to just south of Cooktown (Big Tableland), North Queensland southwards along the Queensland and New South Wales coast and ranges to Pambula, NSW—about 60 kilometres north of the Victoria border.

My interest was aroused when I saw plants offered on the Australian eBay site under the name of

"Cymbidium suave 'White Albino'".

Western Orchids/Laboratories were offering a flask of "Cymbidium suave" White Albino" on eBay in late 2010. However the accompanying photos showed what looked like a pendulous green C. pumilum miniature hybrid. It did not look that it had any suave-shape about it, and the plant habit also didn't show any obvious suave influence. To be honest, I have no idea why they chose to use that image. Again, Western Orchids/Laboratories in their Oz Cymbidium Flask List for 2011 list "K567 Cym. suave white alba variety x self. These have been great growers in the flask."

So where did this genetic material that was in two South Australian nurseries come from?

Some detective work indeed traced this original material back to John Woolf, of Woolf Orchid Culture in Toowoomba, Queensland. The same John Woolf that reported those other clones of albinistic forms of *Cymbidium canaliculatum* in the *AOR* almost three decades ago. Now John has been around orchids almost all of his life. I was hoping John may have at least seen this plant and/or hopefully "the photo" to answer this puzzle.

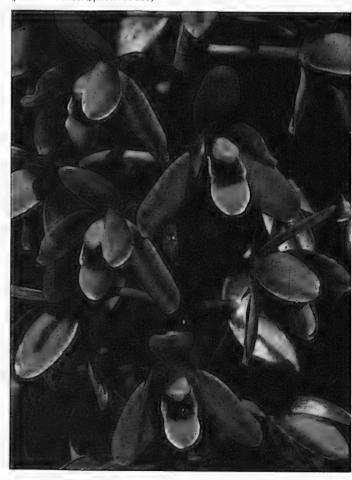
I contacted John and he emailed me that "the *Cymbidium suave* var. *album* pod was given to me by Athol Rosenberg a Queensland Orchid Society Judge and Treasurer of the Native Orchid Society of Toowoomba Inc. (NOSTI). As I have told many people, I cannot guarantee it as I only have his word, also as it is a selfing there will only be a few (if any) albinistics but still well worth the chance. I saw the pod and it certainly looked like *C. suave* not *C. madidum.*" An earlier email stated "the pod was given to me by a local orchid Judge who was given it from someone just north of Brisbane". So the mystery continues.

Sadly, I think this is a phantom plant. In this age of digital compact cameras and even mobile phones with cameras, that something as rare and special as an albino or white-flowered *Cymbidium suave* would not have been photographed, is hard to believe. Most native species orchid enthusiasts are used to the brownish-olive coloured forms that are most common in both *Cymbidium suave* and *C. madidum*, and inexperienced growers could perhaps pass off "bright apple green forms" as albas?

I was talking to Andrew Locke (President of ANOS Sydney Group) about this, who grows and has a special interest in Australian native Cymbidiums. He told me he had already bought one of these seedlings from Valley Orchids in South Australia via eBay and another direct from Woolf Orchid Culture, Qld. It was purchased for \$7.00 in February 2011 in a 50mm pot as "Cymbidium suave var. album", catalogue reference number 9066. Hardly an expensive seedling being profited from! I have also since seen the Woolf seedling, and it certainly doesn't look like a suave – more like a young madidum or a hybrid, now (18 months on) with multiple growths producing small pseudobulbs. Time will tell what this plant actually is, but we are still a few years off.

One day, I look forward to seeing a genuine *Cymbidium* suave forma album. The biggest problem here is that you just simply cannot tell from a distance, as most of the plants you see in the wild are perched up high on gum trees and you need to see inside the flower, and labellum details, to be sure!

Below: Cymbidium suave 'Stewart' CC/OSCOV 1996, this plant received a cultural certificate in 1996. Perhaps a bright green clone such as this was mistaken for an albino or pure green form? (plant: K&D Moore, photo: OSCOV)



Natural hybrids?

Is there a natural hybrid between *C. madidum* and *C. suave* in the wild? They generally do not share the same habitat (*suave* is generally in more open forest); however I have seen both species growing on the same tree in the Eungella National Park, Clarke Range in North Queensland. Their flowering seasons seldom overlap, which would be the greatest inhibitor. There are other areas where both species share the same habitat (including The Mount Windsor Tableland, the Big Tableland, Gympie, Fraser Island and the Numinbah Valley, Qld and Casino, Evans Head, Woodburn and Repton in NSW).

There are no herbarium specimens or live plants in cultivation, of natural hybrids, however the following two recordings hold considerable weight. In the 1980s, John Roberts saw a plant growing in a gumtree on the roadside near Casino NSW that looked like a putative natural hybrid, out of flower, on growth habit. John watched that plant for years, but never caught it in bloom. Sadly road-widening over a decade ago caused the premature demise of this plant, so we will never know. David Jones saw a plant on Fraser Island Qld that looked just like a hybrid between the two. He did not collect any material (plant was too high up) but he did have a good look with binoculars.



In 1994, this plant was awarded by American Orchid Society judges in California as "Cymbidium canaliculatum forma purpurascens 'Cinnabar' HCC/AOS". However it is not a species but the primary hybrid with madidum and should now be known and labelled as Cymbidium Little Black Sambo 'Cinnabar' (plant: Weegie Caughlan, photo: Lourens Grobler)

Cymbidium Little Black Sambo utilised a mottled NSW form of C. canaliculatum (plant hybridised, grown and photographed by Roger Herraman)

Right: This remake of



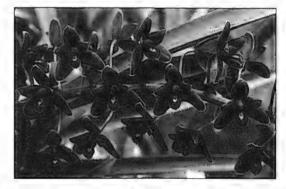
Left:
Cymbidium Little Black Sambo
made using C. canaliculatum
forma viridiflorum. This remake
was made by David Banks in the
late 1980s using pollen sent to
him that was put onto a typical

(plant & photo: Michael Harrison)



Above: Growth habit of plant purchased as a young selfing of "Cymbidium suave White Albino seedling". To the author this looks like a juvenile C. madidum or hybrid (plant & photo: Andrew Locke)

Below: Cymbidium Little Black Sambo'Black Magic' AM/AOS was originally awarded by the Philadelphia Judging Centre of the American Orchid Society back in 1965. I fear many plants of this dark-flowered cultivar now in cultivation in Australia are the result of "mericlones of mericlones" as the plants never seem to grow very large and many of the flower spikes are somewhat stunted, not producing near the numbers of flowers as the original plant (photo: www.parksideorchids.com)





Influence in hybrids

Now will Cliff Hutchins get "albino" forms of *Cymbidium* Little Black Sambo (madidum x canaliculatum) by crossing his "xanthic" madidum with canaliculatum forma viridiflorum? I say, probably not. But I do believe there may be a greater chance of producing albino Little Black Sambo's from the F2s — by sibling crossing the best of these remakes.

Over 25 years ago I did a remake of *Cymbidium* Little Black Sambo using the pollen sent to me of a green *Cymbidium* canaliculatum forma viridiflorum onto a normal brownish/olive-green madidum. One of these plants is still being grown by Mike Harrison of Macquarie Native Orchids, with a colour combination I have not seen elsewhere in this primary hybrid.

Another point worth making, is that there has been confusion overseas in confidently identifying the three Australian species and misunderstanding some of their primary hybrids. In 1994, judges from the American Orchid Society awarded "Cymbidium canaliculatum 'Cinnabar' HCC/AOS", when it was actually a colourful example of Cymbidium Little Black Sambo (madidum x canaliculatum).

Recently, there has been a bunch of seedlings distributed throughout California as "Tetraploid or 4n Cymbidium suave". All the ones flowered that I have seen or been shown photographs of are examples of the primary hybrid Kuranda (madidum x suave). Surprisingly, the best examples I have seen of C. Kuranda were benched at the Taranaki Orchid Society Summer Show in New Plymouth, New Zealand, January 2011, initially labelled and benched in the species class as C. madidum!

I cannot see any commercial value in the use of "albinistic" Australian



Above: Plant habit of *Cymbidium* **Kuranda** (*madidum* x *suave*), obtained as "C. *suave* 4n" (*plant* & *photo: Don Brown*)

Cymbidium species in breeding. I think they will certainly produce a few more novelties for those who prefer more unconventional styles and breeding lines. As it is, *C. canaliculatum* hybrids appeal to a very narrow niche market, with many orchid enthusiasts finding them slow and cranky growers that often take many years to reach maturity. They also have a tendency to sulk when divided, especially when executed at the wrong (cooler/wetter) time of year.

Sadly (purely from a patriotic Australian perspective) much of the finest work involving our indigenous Cymbidium species has been done overseas, with many exciting results realised in the second and third generations, mostly with madidum heritage. It is a direction that Australian hybridists, including backyard growers. have largely ignored. I do see a bright future for these Australian-style Cymbidium hybrids, with the main nurseries supplying them domestically being Tinonee Orchid Nursery in NSW (as seedlings) and Western Orchids/ Laboratories in SA (as flasks). Apart from being appealing to orchid growers. many would make stunning feature garden specimens.

Conclusion

In this article I have attempted to put together, in the one place, all the relevant information I have accumulated and sourced on the "albino forms" of the three Australian *Cymbidium* species, trying to separate the fact from the fiction, and provide accurate references where appropriate: detective work on a never ending jigsaw puzzle. I also look at it as a work in progress, as new seedlings are flowered and new discoveries made. Hopefully it will inspire enthusiastic students to actually look for these unusual colour forms to increase our collective knowledge and understanding.

What I feel is most important is to have these significant finds recorded and documented. This can lead to further discussion and may encourage others to participate and add to our wealth of knowledge. The aim here was to collate all the information and have it freely available in the one place. We also now have a validly published name for the albinistic form of Cymbidium canaliculatum (forma viridiflorum).

So will a true albino or *madidum* forma *album* pop up one of these days? I think Yes, but what will it look like? Well if it comes from the northern parts of its

range (North Queensland), then it may be green to yellow with a greenish yellow and white labellum. From Central and Southern Queensland I would suspect yellow, with a yellow and white labellum. From New South Wales, probably also yellowish as most of the normal flower colour forms are that brownish/olive green.

Mind you, it would be far easier to detect an albinistic form of *Cymbidium canaliculatum*, from a distance, or even a moving car, considering most forms have spotted to maroon coloured flowers, so a bright green is always going to stand out as being different. It is much harder with both *C. suave* and *C. madidum*, as both are essentially predominantly green flowered species and a close up look of the individual flowers and labellum detail is needed for the correct analysis. Quite simply, from a distance you would just never know.

Will there be a white suave, madidum or canaliculatum? I very much doubt it. But never say never. I remember my astonishment years ago when I first saw albino forms of terrestrial greenhoods (Pterostylis) that had stark white blooms! I would have expected these albino forms of Pterostylis nutans and P. pedunculata to have pure (predominantly) green and white blooms – not 100% pure white all over!

The topic of albino forms in Australian indigenous orchids has always interested me. I am still trying to locate a true *Dendrobium tetragonum* var. *hayesianum* – the albino form from the Sydney-Illawarra region. (This is often wrongly confused with *Dendrobium cacatua* (syn. *Dendrobium tetragonum* var. *cacatua* from the montane rainforests of North Queensland). I have seen a plant from the Royal National Park (Sydney) with a pure white labellum, yet had normal "tetragonum" colouring on the sepals.

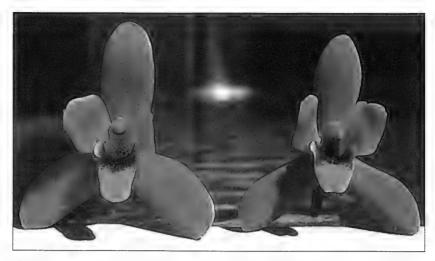
Similarly, I am very interested (and a tad confused) by the variation within *Dendrobium jonesii* subsp. *magnificum* throughout its range, both geographical and altitudinal. Why certain labellum colour forms (pure white vs purple markings) only occur in some areas and not others, at different altitudes (lowland vs mountainous), as well as flower size, flowering times and different habitats (rainforest vs eucalypt woodland) leaves more questions than answers, but we are working on it!

Then again, I often think... the more we learn, the less we know!

Acknowledgments

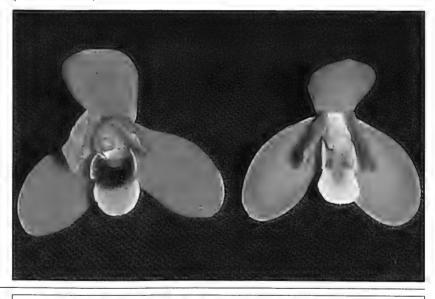
Thank you to the following people who freely shared information and/or pointed me in the right direction to obtain further answers to my many questions on this topic: Ray Clement, Andy Mark Clements. Michael Harrison, Roger Herraman, Cliff Hutchins. David Jones. Andrew Locke, Karen McFarlane, Graham Morris. John Roberts. Randall Robinson, Alan Stephenson, Kevin Weston, John Woolf Nicky Zurcher. Thanks again to Brown. Mark Clements. Don Andy Easton. Laurens Grobler. Michael Harrison, Roger Herraman, Hunt, Cliff Hutchins Andrew Locke for taking and/or providing photographs that helped illustrate this article. Other images were taken by the author. Mark Clements advised me on taxonomic protocols and provided photographs of the type specimen of Cymbidium canaliculatum forma viridiflorum, and supplied the Latin diagnosis. I am most grateful to David Jones, Roger Herraman. Mike Harrison and Jim Cootes for reading and making constructive suggestions on an earlier draft of this paper. David Jones also challenged me on taxonomic and nomenclatural issues and freely shared his thoughts and wealth of knowledge; I really appreciated his honesty and directness in our discussions. I have certainly learnt a lot more about our Australian native Cymbidiums thanks to the people listed above.

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Above: Two different clones of the primary hybrid *Cymbidium* Kuranda, on the left the plant obtained as "C. suave 4n" on the right, the famous cultivar 'Arthur Dawson' (photo: Don Brown)

Below: Comparison of an exceptional well-coloured, broad-segmented and large-flowered clone of *Cymbidium Kuranda* (left) next to *Cymbidium madidum*, one of the parents. Photographed at the Taranaki Orchid Society Summer Show in New Plymouth, New Zealand, January 2011 (photo: David Banks)





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Two New Species of Pterostylis from Western Australia

by David L. Jones and Christopher J. French

Abstract

Pterostylis brevichila and Pterostylis microglossa, both with affinity to Pterostylis aspera, are described as new from Western Australia.

Key Words

Orchidaceae, *Pterostylis brevichila*, *Pterostylis microglossa*, new species, Western Australia, Australian flora.

Introduction

Field work in Western Australia has revealed the presence of two new species of *Pterostylis*. Both species have been illustrated in editions of Hoffman and Brown (1992, 1998) and the opportunity is taken here to describe these taxa as new.

Materials and Methods

Descriptions of both taxa were made from fresh specimens. Dried specimens of *Pterostylis* were examined from the following herbaria; AD, BRI, CANB, CBG, HO, MEL and NSW. Unless otherwise indicated, all types of *Pterostylis* relevant to this study (or photographs thereof), and collections cited, have been seen by us.

Taxonomy

1. Pterostylis brevichila D.L.Jones and C.J.French, sp. nov., with affinity to *P. aspera* D.L.Jones & M.A.Clem. but differing by its shorter habit and smaller brown-striped flowers with the labellum much shorter than the sinus. Additionally the species has a more inland and easterly distribution and the rosettes have smaller, rounded leaves.

Type: Western Australia. Roe District. Griggs Road, 21.7 km north of Coolgardie – Esperance Highway, 16 Aug. 2000, C.J.French 2310 (holo CANB 624624).

Illustrations: Page 339, Hoffman & Brown (1998) – as *Pterostylis* aff. *aspera*; page 400, Hoffman & Brown (2011) – as *Pterostylis* sp. 'dwarf shell'.

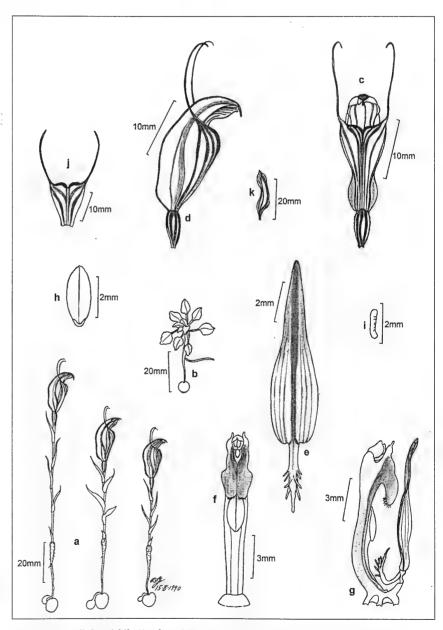


Fig. 1. Pterostylis brevichila, Truslove, WA, 15 Aug. 1990, Don Voigt.
a. flowering plants; b. rosette; c. flower from front; d. flower from side; e. labellum from above, flattened; f. column from front; g. column and labellum from side; h. stigma; i. synsepalum; j. pollinium; k. petal. Drawing 15 Aug. 1990 by D.L.Jones ©



Description: Tuberous terrestrial *herb* growing in clonal colonies. Rosette separate: leaves 5-10, bright green; lamina ovate, 6-10 mm long, 4-7 mm wide, margins entire or crinkled, apex obtuse to shortly acute; petioles 7-9 mm long, slender, not winged. Scape 8-12 cm tall, very slender, smooth. Cauline leaves 4-5, dark green, spreading; lamina lanceolate, 10-25 mm long, 4-5 mm wide, sheathing at the base, margins entire or crinkled, acuminate. Ovary narrowly obovoid, 8-10 mm long, cinnamon brown. Flower solitary, 23-26 mm long, stiffly erect, white with cinnamon brown to red-brown stripes on the galea and sinus, these coalescent towards the galea apex; galea slightly gibbous at the base then obliquely erect before bending forwards in a long shallow curve, the apex erect or slightly decurved. Dorsal sepal boldly striped, apex reddish brown, 25-26 mm long, 10-12 mm wide, inflated at the base then tapered gradually, ending in a filiform point 1-2 mm long. Lateral sepals erect, tightly embracing the galea; sinus hardly protruding, sloping inwards in a shallow curve, the upper margin sloping gently to the shallowly notched centre; conjoined part boldly striped, 13-14 mm long, 12-13 mm wide, narrowed to c. 4 mm wide at the base, the upper margins inrolled, tapered gradually into the free points; free points filiform, 13-16 mm long, erect, held high above the galea, curved forwards near the apex. Petals obliquely lanceolate, falcate, 25-27 mm long, 5-5.5 mm wide, dilated distally, acute, central part white, margins tan, apex reddish; flange c. 1 mm wide, unequally deltate, obtuse. Labellum attached to a short basal claw, erect, straight, not visible through the sinus in the set position, white with tan stripes in the proximal twothirds, dark brown in the distal third; lamina narrow-lanceolate, 9.5-10 mm long, 2.3-2.5 mm wide, tapered fairly suddenly in the distal third, apex obtuse; basal appendage linear, 3-4 mm long, incurved in a semicircle, apex penicillate; callus c. 0.5 mm wide, hardly raised, expanded distally to c. 0.7 mm wide, dark reddish-brown. Column brownish, 11-12 mm long, stiffly erect, angled away from the ovary at about 45° in the proximal quarter, then erect. Column wings, brown, c. 4 mm long; basal lobe at an angle of about 70°, c. 2 mm long, c. 1 mm wide, inner margin more or less incurved, adorned with numerous white cilia. apex obtuse; mid section white, c. 2 mm long; apical lobe linear, c. 0.8 mm long, obtuse. Stigma elliptic, 2.8-3.2 mm long, 1-1.2 mm wide, raised. Anther c. 1 mm long, obtuse. Pollinia linear-clavate, 1-1.2 mm long, yellow, mealy. Capsules 15-17 mm long, 3-4 mm wide, brown,

Distribution and Ecology: Distributed from east of Hyden through Salmon Gums to Mt Ragged. Hoffman & Brown (2011) include a disjunct population west of Woodanilling but we have not seen material from there. It grows mainly in low melaleuca shrubland in wintermoist areas of sandy clay, less frequently in open mallee woodland in drier brown clay loam and red sandy loam.

Flowering Period: Late July to September, sometimes as late as October.

Recognition: Characterised by short habit (8-12cm tall), small dumpy flowers that are strongly striped and suffused with red brown and a short labellum that does not extend beyond the sinus in the set position. The rosettes are also distinctive with small rounded leaves.

Notes: This new species has similarities with *P. aspera* but is readily distinguished by its shorter habit and smaller flowers with the labellum much shorter than the sinus. *Pterostylis aspera* has significantly larger flowers and the labellum tip is as long as the sinus or extends above it. The rosettes of the two species are different with *P. aspera* having ovate-lanceolate acuminate leaves compared with the smaller bluntly rounded leaves of the new species. Additionally *P. brevichila* has a more inland and easterly distribution than that of *P. aspera*.

Pterostylis brevichila also shares similarities with *P. microglossa* (also described as new in this paper) which has narrower paler flowers (green and white with red brown in the sepals) and pointed rosette leaves. *Pterostylis microglossa* also has a more northerly near-coastal distribution.

Pterostylis brevichila frequently occurs in large colonies with a very low proportion of flowering plants.

This species has the vernacular of the 'Dwarf Shell Orchid' (Hoffman & Brown 2011).



Above: Pterostylis brevichila Kau Rock, WA 22 August 1997

Etymology: From the Latin *brevis*, short and *cheilos* lip, in reference to the short labellum.

Conservation Status: Widespread and conserved in reserves.

2. *Pterostylis microglossa* D.L.Jones and C.J.French, **sp. nov.**, with affinity to *P. aspera* D.L.Jones & M.A.Clem. but differing by smaller narrower flowers and a much shorter labellum. Additionally it has a more northerly distribution and the flower colouration is different, being white with green striae, the lateral sepals and margins of the dorsal sepal with conspicuous red-brown markings.

Type: Western Australia. South Boundary of Kalbarri National Park, c. 1.5 km west of Grey Road, 21 June 1997, *C.J. French* 513 (holo CANB).

Illustrations: Page 442, Hoffman & Brown (1998) – as *Pterostylis* aff. *aspera*; page 399, Hoffman & Brown (2011) – as *Pterostylis* sp. 'Kalbarri'.



Description: Tuberous terrestrial herb growing in clonal colonies. Rosette separate; leaves 4-11, bright green; lamina ovate, 6-15 mm long, 4-8 mm wide, margins entire or crinkled, apex acute to acuminate; petioles 5-8 mm long, slender, not winged. Scape 5-12 cm tall, very slender, smooth. Cauline leaves 4-6, dark green, obliquely erect; lamina lanceolate, 10-30 mm long, 3-6 mm wide, sheathing at the base, margins entire, acuminate. Ovary narrowly obovoid, 8-10 mm long, pale green. Flower solitary, 20-25 mm long, stiffly erect, white with green stripes, red-brown stripes and suffusions on the sinus and margins of the dorsal sepal; galea slightly gibbous at the base then obliquely erect before bending forwards in a long shallow curve, the apex shallowly decurved. Dorsal sepal boldly striped, apex reddish brown, 22-24 mm long, 8-10 mm wide, inflated at the base then tapered gradually, ending in a tapered point 1-2 mm long. Lateral sepals erect, tightly embracing the galea; sinus hardly protruding, sloping inwards in a sharp curve, the upper margin sloping gently to the shallowly notched centre; conjoined part boldly striped, 11-13 mm long, 10-12 mm wide, narrowed to c. 3 mm wide at the base, the upper margins inrolled, tapered gradually into the free points; free points filiform, 12-15 mm long, erect, held high above the galea, curved forwards near the apex. Petals obliquely lanceolate, shallowly falcate, 20-23 mm long, 4-4.5 mm wide, dilated distally, obtuse, central part white, margins green, apex reddish; flange c. 1 mm wide, unequally deltate, obtuse. Labellum attached to a short basal claw, erect, straight, the tip visible above the sinus in the set position, white with green to brownish stripes in the proximal two-thirds, dark red-brown in the distal third; lamina more or less oblong in the proximal two-thirds, 9-10 mm long, 2-2.3 mm wide, tapered suddenly in the distal third where c. 5 mm wide; apex obtuse; basal appendage linear, c. 3 mm long, incurved, bent near the middle, apex penicillate; callus c. 0.2 mm wide in proximal half, c. 0.4 mm wide towards the apex, hardly raised, dark red-brown. Column white and brown, 10-11 mm long, stiffly erect, angled away from the ovary at about 45° in the proximal quarter, then erect. Column wings brown, c. 4 mm long; basal lobe at an angle of about 80°, c. 1.5 mm long, c. 0.8 mm wide, inner margin more or less incurved, adorned with short white cilia, apex obtuse; mid section brown and white, c. 2 mm long; apical lobe linear, c. 0.8 mm long, obtuse. Stigma oblong to scutiform, 2.2-2.5 mm long, 1-1.2 mm wide, raised. Anther c. 1 mm long, obtuse. Pollinia linear, 1.2-1.5 mm long, yellow, mealy. Capsules not seen.



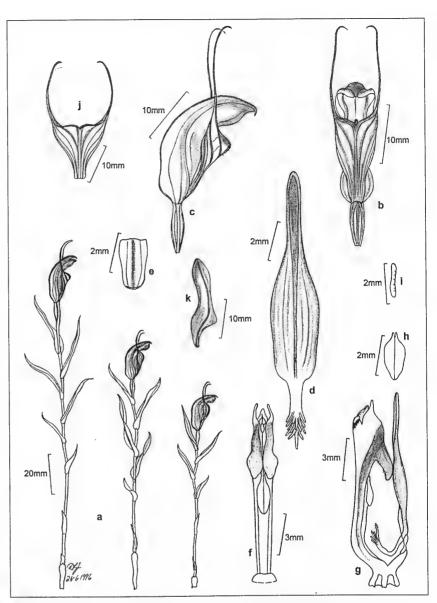


Fig. 2. Pterostylis microglossa Northern boundary, Kalbarri National Park, WA, 25 June 1996, A.P.Brown 2001.

a. flowering plants; b. flower from front; c. flower from side; d. labellum from above, flattened; e. labellum hinge; f. column from front; g. column and labellum from side; h. stigma; i. pollinium; j. synsepalum; k. petal. **Drawing 26 June 1996 by D.L.Jones** ©





Above left: *Pterostylis brevichila* Kau Rock, WA 22 August 1997: non-flowering rosette of leaves

Above right: *Pterostylis microglossa* Leeman, WA 5 July 1996: non-flowering rosette of leaves

Distribution and Ecology: Coastal areas between Moore River and Zuytdorp Cliffs north of Kalbarri. It grows in mallee shrubland in shallow brown soils over limestone, usually with surface outcroppings of limestone rock.

Flowering period: June and July.

Recognition: Characterised by small colourful flowers that are white with green striae, the lateral sepals and margins of the dorsal sepal with conspicuous red-brown markings. Additionally the labellum is short, the tip just extending above the sinus in the set position.

Notes: This new species also has similarities with *P. aspera* but can be distinguished by its shorter habit and smaller, narrower, distinctively coloured flowers. The labellum lamina

is short (c. 10mm long) compared with that of *P. aspera* (c. 15mm long) but in both species the tip is visible from the front of the flower in the set position (sometimes protruding in *P. aspera*). *Pterostylis microglossa* also shares similarities with *P. brevichila* (described as new above) which has dumpier dark brown flowers and distinctly rounded rosette leaves. *Pterostylis brevichila* also has a more southerly distribution and there is no overlap in their ranges.

The new species forms sporadic putative hybrids with *P. aspera* in the southern parts of its range. These hybrids persist and establish as clonal colonies.

This species has the vernacular of the 'Kalbarri Shell Orchid' (Hoffman & Brown 2011).

Etymology: From the Greek *micros*, short and *glosso* tongue, in reference to the very short labellum.

Conservation status: Locally common and conserved in Kalbarri National Park.

Acknowledgements

We thank Marion Garrett and Karina Richards for technical assistance, Jean Egan for preparing the drawings for publication, Andrew Brown for bringing both species to our attention and furnishing specimens for illustration, Garry Brockman, Nye Evans and the late Bill Jackson for companionship on field trips.

Original line illustrations by David L. Jones, colour photographs by Chris French.

Literature Cited

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Parramatta and District Orchid Society Winter Show 2012

Text and photos by David Banks

The annual Parramatta and District Orchid Society Winter Show for 2012 was again held in late June at Winston Hills Mall, a large and popular shopping centre in western Sydney. This independent orchid society was founded in 1950 and has a very strong following. It has a large membership base that grows a wide range of cool growing to tropical orchids, species and hybrids, native and exotic. Some of the finest *Cymbidium* growers in the country are amongst its members.

Winston Hills Mall is a fabulous venue for our shows (held outside Big W) and we are very appreciative of their managements continued support.

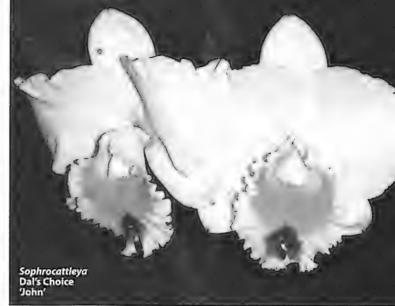
Our Winter Show featured a wide range of flowering orchids brought in by their proud owners and growers, which are assessed and judged by a qualified panel on the Wednesday evening, after set-up.

Grand Champion of the Show (and Champion *Cattleya* alliance) went to *Sophrocattleya* Dal's Magic 'Dondrup' AM/ AOC-NSW 2012, owned by Sandra Crosby and Tony Costa. They are always enhancing their reputation as elite growers who have an eye for quality plants. This plant had won top honours at another orchid show the week before, where it was granted an Award of Merit by the OSNSW Judging Panel.

I know Sandra and Tony were thrilled with this, but what more do you need for a quality flower to be granted a First Class Certificate? Here was the finest mini-catt of this style that I (and many others) had ever seen. Why don't they get a bit more fair dinkum about these awards? If you go through the various judging criteria I fail to see where it falls down. It has everything you would want in such an orchid. It was a compact plant with two simply gorgeous flat blooms with perfect shape, a knockout labellum and exquisite colour. Sandra and Tony also benched a lovely white mini-catt, Sophrocattleya Dal's Choice 'John' that attracted many favourable comments.

Reserve Champion of the Show and Champion *Paphiopedilum* went to Graeme Banks OAM for his plant of the classic hybrid *Paphiopedilum* Winston Churchill 'Indomitable' FCC/AOS-RHS. This has been an outstanding breeding plants over many decades, as it throws good shape, apart from being highly fertile and producing a lot of viable seed! Unfortunately, even though the individual bloom can last for over ten weeks in good condition, it is generally only in "show" condition for about a week or so. After this time, the dorsal sepal generally furls a touch and the petals may also fall forward. However, on its day, it's still a classic flower.



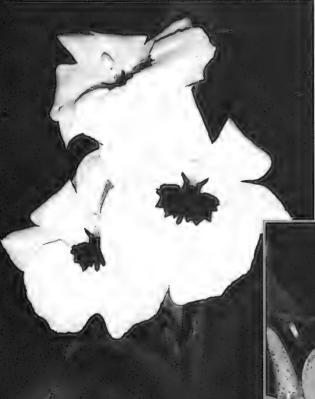


Right: Cymbidium (Jessie Blakiston x Lunar Blaze)

Norm and Val Shipway are essentially rebuilding their collection after a mysterious herbicide cloud decimated (investigations are ongoing) their orchids and garden, plus many neighbours in the immediate vicinity. Norm – who is our Patron - has been restocking, mainly with intermediate/miniature *Cymbidium* seedlings from Keith Wallace Pty Ltd. One of these seedlings, bred by Gordon Giles, *Cymbidium* (Jessie Blakiston x Lunar Blaze) showed a lot of potential on a young plant, with 16 well-coloured and shapely blooms offset by a wonderful broad labellum.



Lycastes are becoming more fashionable again, in both the classic "skinneri" hybrids as well as summer-flowering novelties. Sandra and Tony also benched a wonderful exhibit of the easily grown primary hybrid *Lycaste* Lucianii (lasioglossa x skinneri). Ken Massingham, who earlier this year was bestowed Life Membership of PDOS, benched the eye-catching Miltoniopsis Lillian Nakamoto 'Tanto'. It really give the illusion of a black and white flower.



Above: Miltoniopsis Lillian Nakamoto 'Tanto'

Right: Dendrobium Avril's Gold 'Ray'

Below: Dendrobium Avril's Gold 'Pumpkin Pie'





Australian native orchids and their hybrids are also very popular throughout the membership. The grex *Dendrobium* Avril's Gold continues to dominate the showbench. These plants were notoriously slow as seedlings, and it must be remembered that some of these original plants are now over twenty years old. A number of select cultivars have also been tissue cultured, and the two different clones benched at the show were indeed mericlones. *Dendrobium* Avril's Gold 'Ray', benched by master growers Andy & Jessie Gatt, is a vigorous plant that was divided last season. *Dendrobium* Avril's Gold 'Pumpkin Pie' (cloned in 2004) had a nice spray of clean flowers, still on a developing plant, owned by





Above: Pterostylis nutans 'Baulkham Hills'

Andrew Locke displayed a well grown pot of the local nodding greenhood, *Pterostylis nutans* 'Baulkham Hills'. This is one of the native deciduous terrestrial species that is easily grown and multiplies well in cultivation.

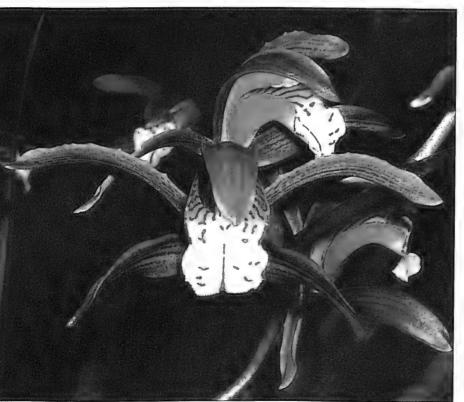
Mal & Fay Ferguson benched a well grown and flowered example of the species Cymbidium erythraeum, the clone named 'Paradise' which came from southern China, that has been distributed and marketed by Royale Orchids. They have shared this orchid around the world and are to be commended for this. Now let me say from the outset, I love this plant. It has fine foliage. it's an easy bloomer and grows like a weed. Almost all the plants growing in shadehouses and backyards in Australia are either selfings or mericlones of the 'Paradise' cultivar. Just over a decade ago, this was a very rare plant in cultivation. However it recently was granted (gifted?) an FCC! What were the judges thinking? Sure give it a cultural certificate (even another one!), but a First Class Certificate should be for the very upper echelon of orchid blooms. Good judges would be able to assess a truly outstanding example from a single flower; however – at best – this is just an average form of the species. The granting of quality awards appears to have become very random over the past decade or so, something that sadly appears nationwide. This does nothing to quell the growing whispers that the judging panel appears to look after its own!

PDOS will also be hosting its Spring Clivia and Orchid Show also at Winston Hills Mall, from September 20th to 22nd 2012. It remains the only main *Clivia* show in New South Wales.

The Parramatta and District Orchid Society meets the 4th Tuesday of the month (except December), in the Banksia Room, Wentworthville Community Centre, on the corner of Dunmore and Lane Sts., Wentworthville. Visitors and potential new members would be made most welcome. Visit www.parramattaorchidsociety.org

David Banks President, PDOS david@hillsdistrictorchids.com

Below: Cymbidium erythraeum 'Paradise'



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My Five Favourite Orchids (and Why) Brassavola nodosa

by Robert Friend

I find it hard to choose favourite orchids because, for me, the one that's in flower or about to flower is the favourite of the moment. Nevertheless, the following are enduring favourites of mine, strictly in alphabetical, not preferential, order.

1. Brassavola nodosa

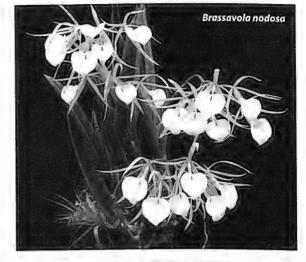
This species is a candidate for gardens and shade houses in subtropical climes. South of about Coffs Harbour NSW it requires warmth in winter. Beautiful as it is, with its fragrance and largelipped creamy flowers, it is as a parent that B. nodosa comes into its own. I grow, mostly on garden trees, a number of primary hybrids including crosses of this species with Cattleya bicolor (Bc. Binosa), Cattleya Little Angel, Lc Caudebec and Cattleya Lulu. Without exception they are free growers, flowering on each new lead, often four times each year. They inherit the Brassavola's fragrance, compact size and pest resistance.

2. Cymbidium tracyanum

One day in June, 1949 my mother put some flowers in a vase on the mantel-piece. I was aware of a strong fragrance and my ten year old nose tracked it to the flowers. I looked at them and saw an arching stem of strange, brown-striped flowers with an amazing cream coloured, red-flecked, hairy tongue poking out. They looked bold and exciting. Their perfume was redolent of unknown, exotic tropics. My mother told me it was an Indian orchid called Cymbidium tracyanum. Then and there my lifelong love of orchids commenced. This species commemorates Sidney Tracy, a 19th century orchid nurseryman who first flowered it. It is a bit warmer growing than Cym. lowianum and grows well in well-drained rockery pockets or hollow logs.

3. Dendrobium nobile

Another Asian species, D. nobile is the progenitor of many fine modern 'softcane' Dendrobium hybrids. Coming from considerable elevations in Northern India, Burma and Southern China, this species enjoys a cool, dry rest through the cold months. It will grow in coastal climates from North Queensland to Eastern Tasmania. It succeeds well on suitable garden trees affixed a bit above eye level where its canes will arch down gracefully, presenting its flowers to the viewer just as its jungle-dwelling cousins did to the first 19th century orchid hunters. D. nobile is used in Chinese herbal medicine. Its introduction to European orchid growers came when John Reeves, a tea inspector with the East India Company, purchased dried canes in a Macao market and sent them back to England. D. nobile doesn't grow in Macao — the canes were carried across from Yunnan.





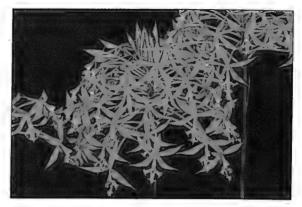
Above: Cymbidium tracyanum

Below: Dendrobium nobile



4. Epidendrum macrocarpum

This species, better known under its synonym *E. schomburgkii*, is one of the 'crucifix' orchids. It is an imposing grower, sending up strong, fleshy-leafed canes through summer and autumn with terminal flower stems appearing in winter. The flower heads have a 'Christmas tree' outline as the large orange blooms open successively whilst the stem keeps extending. Unlike nearly all 'crucifix' type *Epidendrums*, this species' flowers are resupinate, meaning they open with the lip facing down, not up as in the majority of *Epidendrum* species and hybrids. Hybridists don't seem to have utilised this asset yet. Imagine a strain of brightly coloured *Epidendrums* that would grow in your garden bed in full sun, producing large heads of 5 cm flowers from late winter to December. Imagine those flowers looking at you rather than pointing their lips up in the air. You can bet *E. macrocarpum* will be in the background of this strain.



Above: Epidendrum macrocarpum

5. Laelia anceps

I've seen this species growing as a garden plant as far south as Warrnambool in southern Victoria. In its Mexican and Guatemalan natural habitat it grows, mostly on coarse-barked trees, at elevations where frosts are quite frequent in winter. Remember that frosts form on the ground and there is a rough rule of thumb that the temperature increases about 1 degree for each metre above ground level. So an epiphytic orchid growing two or three metres above the ground should be warm enough to survive a frost. *Laelia anceps* is a rambling grower that won't stay long in a pot. It's a better candidate for potting in a basket or on a mount or, best of all, on a rough-barked tree in your garden. It flowers from autumn to early winter. Hybridists are starting to use its cold-tolerance and long flower stems to produce cool growing *Cattleya* Alliance hybrids that display their flowers well above the foliage.

As you can tell, I am keen on growing orchids naturally rather than in pots. I developed and taught courses leading to Certificates II and III in Orchid Growing. These courses have been accredited under the Australian Quality Training Framework and lead to the same qualification as successful TAFE students attain. So far as I know, these are the only formally accredited Orchid Growing courses in Australia. I also taught Certificate II and Certificate III in Horticulture. Part of my Orchid Growing courses cover growing orchids in the landscape. (All photographs supplied by the author.)

> Robert Friend The Orchid Academy Nerang Qld

Editor's Note: Sadly, not long after receiving this article, Robert and his wife Lili – who used to trade as Orchids by Olympia - both passed away suddenly, which was a huge loss to their family and friends, and the orchid fraternity. DPB.



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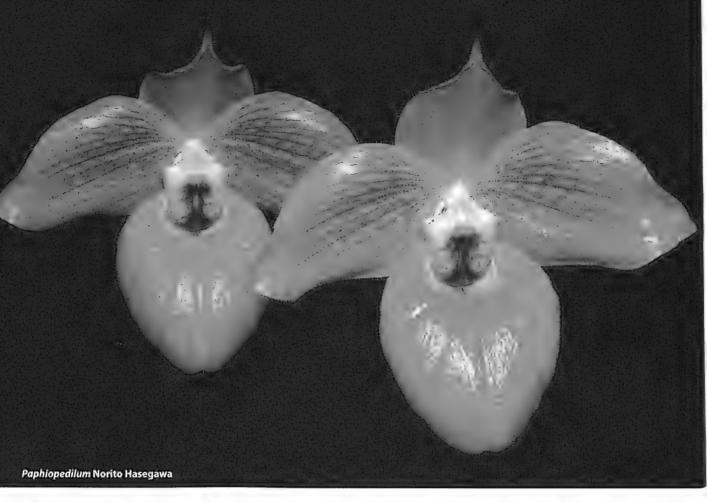
AT LAST - NO ROT



Above: Laelia anceps growing on a street tree

Below: Laelia anceps growing in the wild





St. Ives Orchid Show and Fair: "THE BIG ONE"

Text by John McAuley, photographs by Bill Dobson

The 13^{th} Annual St. Ives Orchid Fair and Show is on again this August 17^{th} – 19^{th} 2012 at the usual venue of the St. Ives Showground on Mona Vale Road approximately midway between St. Ives and Terrey Hills. The Fair and Show continues to go from strength to strength and if the past shows are anything to go by, this year will be something not to be missed. The St. Ives Show features competitive displays from the four local organising Societies and from other invited Societies and vendors. Other special features of the Show are the Floral Art, Art and Photographic competitions using or featuring orchids. In 2011, excluding the Floral Art, Art and Photographic displays, a total of eleven orchid displays, each featuring a myriad of colours, shapes and genera were enjoyed by all who attended. Displays ranged from those made up of mixed orchid genera to those containing exclusively Australasian native orchids, and one dedicated to only species. ranging from all parts of the world.

Another special feature is the hall dedicated to orchid sales from numerous local, interstate and sometimes overseas vendors. Apart from the fantastic orchids in flower, there are orchids from different genera, too numerous to anticipate. One can also find potting media, pots, chemicals and all the other sundry items that an orchid grower needs to achieve perfect blooms. Orchid choice and prices tend to suit all budgets from the person who just wants a nice flowering *Cymbidium* for the home, to the enthusiast who wants that rarity that he or she has been seeking over the years. Raffles and potting demonstrations take place at various times throughout the Fair. One informal aspect of the Fair is the willingness of vendors and others in giving unlimited advice to visitors, who may have just purchased their first orchid, and to seasoned growers trying to increase their knowledge.

The Grand Champion of the 2011 show was a magnificently flowered *Paphiopedilum* Norito Hasegawa, grown by Mrs A. Baker which was also the Champion Paphiopedilum Hybrid. The Reserve Champion was *Cattleya* Dianne Diehm 'Dendi' grown by Dendi Orchids of Griffith, NSW which also won the Champion Laeliinae Hybrid.



To name a few of the other champions; the Champion Standard Cymbidium was George Serhan's magnificent Cymbidium Serhan's Passion 'Marion'. The Champion Native Orchid Hybrid, Dendrobium Awespot, was grown by Henk van den Berg who also won the Champion Australian Native Species with his Dockrillia teretifolia. The First Prize for an Island Display went to the North Shore Orchid Society and the First prize for a Table-Top Display was won by Dendi Orchids.

Major Prizewinners St. Ives Orchid Fair 2011:

Grand Champion Orchid of the Show:

Paphiopedilum Norito Hasegawa (Mrs A. Baker)

Reserve Champion Orchid of the Show:

Cattleya Dianne Diehm 'Dendi' (Dendi)

Section Champions

- Cymbidium Standard: Cym. Serhan's Passion 'Marion' (G. Serhan)
- Cymbidium Miniature / Intermediate: *Cym.* Drouin Masterpiece 'Tango' (Baritta Orchids)
- Laeliinae Hybrid: Cattleya Dianne Diehm 'Dendi' (Dendi)
- Paphiopedilum Hybrid: Paphiopedilum Norito Hasegawa (Mrs A. Baker)
- Vandaceous / Phalaenopsis Hybrid: Phal. (Taisuco Smile x Karla's Blush) (Dendi)
- Oncidiinae Alliance Hybrid: *Odm. tigrinum* x *Oda.* Pumalo (Royale)
- Australian Native Hybrid: Dendrobium Awespot (Henk van den Berg)

- Australian Native Species: *Dockrillia teretifolia* (Henk van den Berg)
- Exotic Species: *Dendrochilum niveum* (Royale)
- Orchid Hybrid not elsewhere specified: Angulocaste Nowra (Royale)
- Seedling any Genera: *Phal.* (Taisuco Smile x Karla's Blush) (Dendi)
- Cymbidium Seedling: Cym. (Zenela Elizabeth x Valley Splash) (G. Serhan)
- Specimen: Mediocalcar decoratum (P. & Y. Spence)
- Champion Art: Paphiopedilum insigne (Cary Polis)
- Champion Floral Art: (Gloria Cushway)

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Discover Mackay's Beautiful Orchids

If you're looking for a warm place to visit this Spring and a region that will be in full bloom with stunning orchids than look no further than the Mackay region, in North Queensland. Mackay Regional Council in partnership with the Mackay and District Orchid Society will be hosting the region's first Orchid Extravaganza on September 22 and 23 at the Ken Burgess Orchid House in Queens Park, Mackay.

Mackay Regional Council is one of only a handful of councils that grow and maintain their own orchid collection. The Ken Burgess Orchid House features over 600 varieties of orchids in all shapes and sizes including Australian native orchids as well as exotic orchids from around the world including the large and rare *Bulbophyllum fletcherianum* which has flowered three times in four years.

The Mackay Orchid House was opened in 1988 and was named after a Queens Park Curator Ken Burgess who was a keen orchid enthusiast. He supplied plants from his private collection which, combined with council's own orchids have grown to become one of the finest houses of its kind in Australia.

Renovated with a new roof after it was damaged by cyclone Ului the Mackay Orchid House is now a light and airy Orchid House. The building is octagonal in design and covers about 270 square metres.

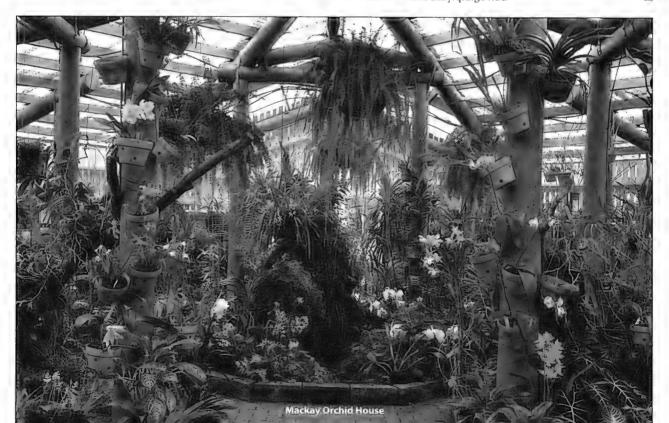
As part of council's commitment to the ongoing success of its Orchid House council sent Horticulturalist Sue McCormack

to the 20th World Orchid Conference in Singapore to learn more about orchids. When in Singapore Sue was impressed with the Papua New Guinea display with their Section Spatulata *Dendrobium* hybrids as it has a strong link with Mackay through Marg Purnell. Marg lived in Papua New Guinea for many years and on her return to Mackay remained passionate about the Papua New Guinea Orchids. Unfortunately her collection was lost and Sue and council are trying to revive the collection in her honour.

The Mackay Orchid House is open all year round, Monday to Friday 10am to 11am and 2pm to 3pm and on Sunday 10am to 2pm and entry is free.

The Mackay Orchid Extravaganza will be held on Saturday, September 22 and Sunday, September 23 from 10am to 3pm at the Orchid House, Mackay. Over 1000 magnificent orchids will be on display from the Orchid House collection, Mackay and District Orchid Society, Pioneer River Orchid and Plant Association and local orchid nurseries. There will be also be plenty of orchids and accessories on sale and free workshops throughout the day. Entry to the event is by gold coin donation.

For more information on Mackay's Orchid House or the Mackay Orchid Extravaganza please call Mackay Regional Council on 1300 MACKAY (622 529) or visit www.mackay.qld.gov.au





Orchid Digest Medal for 2012

The *Orchid Digest* Medal is awarded for international meritorious service to orchids. The solid silver and bronze award has been presented at various intervals; the first was in 1955 and almost 30 medals have now been awarded since then. Amongst those who have been recipients include iconic orchidists such as Gordon Dillon, Ernest Hetherington, Jack Fowlie, Eric Young, Carl Withner, Rebecca Northen, Phillip Cribb and Joyce Stewart.

At the recent Orchid Digest Speakers Day, held at the esteemed Huntington Botanical Gardens, San Marino, California, USA, the inductee for 2012 was announced, and I am pleased to report that Australia's David Banks was the admirable and popular recipient for this year. David also gave an extensive and informative PowerPoint presentation on "The World of *Bulbophyllum* Species" later in the day.

Professor Harold Koopowitz made the presentation to David on behalf of the *Orchid Digest*. Sandra Svoboda in her joint capacities as President of the American Orchid Society and Editor in Chief of the *Orchid Digest* and Jim Folsom, Director of The Huntington were also present and offered their congratulations in front of well over 100 attendees.

David becomes only the second Australian (after Dr. Kingsley Dixon of Western Australia) to have received this medal. It is inscribed as an "Award of Recognition for Meritorious Service to the Orchid World. Presented to David Banks by the Orchid Digest Corporation 7/7/2012".

Harold Koopowitz Editor Emeritus Orchid Digest Santa Ana, CA, USA





Left: David Banks receiving the Orchid Digest Medal from Harold Koopowitz (photo: Steve Hampson)



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FLORA'S ORCHIDS

Senior Consultant David P. Banks

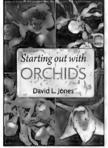
Part of the best-selling Flora range, this is the definitive guide to orchids with over 1,500 entries. Ranging from the unique to the unusual, the beautiful to the bizarre, the unique to the unusual, the beautiful to the bizarre, orchids have long symbolised beauty, elegance and refinement. Flora's Orchids presents more than 1,500 varieties of this highly variable plant family, with entries accompanied by at least 1,300 stunning colour photographs. The orchids are arranged by genus in an A-Z format. Each entry first lists the scientific name in Letins, effect accompanied by a child surprise and the science of the surprise and the surprise of the surprise and the surprise of the surprise and the surprise of A-Z format. Each entry first lists the scientific name in Latin, often accompanied by a Latin synonym and, where appropriate, the translated common name. Plant spread and height are listed, followed by symbols indicating plant type, natural growing locations, growing conditions, frost tolerance, preferred temperatures, type of flower, and preference for pot or mount cultivation.



The brief descriptions explain the type of genus, geographic area, and flowering and dormancy seasons. There is a wealth of sound cultural and propagation advice.

AOR Editor David P. Banks was the Senior Consultant for Flora's Orchids and is also credited as the Principal Writer. Especially valuable for aspiring botanists and average gardeners is the background information that precedes the dictionary text and explains orchid varieties, taxonomy, hybridisation, history, cultivation, propagation, and more. The history section delves into the fascinating historical development of the plant for culinary and medicinal usage and also explores the use of orchids in folklore and literature. A detailed cultivation table for each of the species is found in the appendix. This work is regarded by many as the logical replacement of What Orchid Is That?

368 pages, colour. 308mm x 238mm. Hardcover.



STARTING OUT WITH ORCHIDS by David L. Jones

David Jones is arguably one of Australia's most prolific, precise and respected botanical and horticultural authors. The book is divided in respected botanical and horticultural authors. The book is divided in two parts. Part One begins with the cultivation chapters, covering Easy Orchids for Beginners, General Cultivation Requirements, Growing Epiphytic Orchids, Growing Terrestrial Orchids, Orchid Pests and Diseases, Housing Your Orchids and Propagating Your Orchids. The information contained within these pages alone is required reading for all beginners through to experienced orchid growers. The text is very easy to read and understand with numerous sound cultivation tips and treatments discussed. There are many excellent and clear line illustrations that help describe terms or excellent and clear line illustrations that help describe terms or highlight diagnostic features. There are over 250 colour photographs.

Part Two discusses the orchids themselves with concise information on each species. They are grouped primarily according to climatic requirements, starting with cool growing orchids progressing to the warm growers, in alphabetical sequence first with terrestrial genera, followed by the epiphytes. Both Australian and exotic species are treated together. For each entry there is specific detailed information on each species, as well as a simple table giving the basic cultivation needs and flowering season. A glossary is also included to explain unfamiliar terms.

240 pages, colour. 210mm x 148mm. Softcover.

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MORE FLOWERING ORCHIDS THROUGHOUT THE YEAR by Ross Macdonald

This is the sister volume to Cool Flowering Orchids throughout the Year. It is in the same format and st volume covers a further 31 volume covers a furth A FEW COPIES mers who wish flowers that they to see an a



132 pages. 242mm x 168mm. Softcover.

could grow.

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ORCHIDS IN YOUR GARDEN How to grow orchids in the backyard by Robert Friend

It sounds too good to be true, but orchids are as easy to grow in the backyard as a lawn or a bed of roses. Despite their exotic reputation, the everyday gardener can grow orchids without special pots or greenhouses.

The book shows you haw to introduce orchids into the garden, by attaching them to trees, fixing them on rocks and walls, or planting them in garden beds. With more than 150,000

species and hybrids of orchids in the world, there are plants suitable for every garden.

Robert Friend draws on a lifetime's experience with orchids to explain how to choose the right orchid for your climate and how to landscape orchids in different types of gardens. Ranging from tropical to cool climate areas, from large acreages to small courtyard gardens, almost every backyard can enjoy the best of one of nature's wonders.

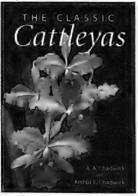
144 pages. Colour and B&W.

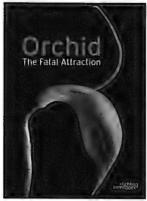
THE CLASSIC CATTLEYAS by A.A. Chadwick and Arthur E. Chadwick

In 1818, William Cattley succeeded in flowering one of the first species of the genus that would bear his name. These first cattleyas are the classic cattleyas, whose form defined the essence of tropical orchids for generations to come. Indeed, the colour of their flowers became known as "orchid." In this helpful and informative book, each classic Cattleya species (and cattleya-like Laelia species) is described in fascinating detail, and its role in breeding programs is elucidated. All that is required to appreciate and grow the largeflowered cattleyas successfully is included. There are ten line drawings and 162

wonderful colour photographs. Cultivation, humidity and watering, fertilising, propagation, and diagnosing and treating problems are detailed, making this volume valuable for both veteran orchid enthusiasts and those who simply love these beautiful flowers.

252 pages, colour. 260mm x 185mm. Hardcover.





text and images; this is the book for you.

HUNTLEYAS

142 pages. Colour, Hardcover,

ORCHID: THE FATAL ATTRACTION by Anne Ronse

The subject of orchids is one close to the heart of many floral designers, some feel it's a privilege to work with these flowers and plants but often wonder how many designers actually decide to investigate the history and nature of them rather than just how to condition them. The text by Dr Anne Ronse, is informative and enthusiastic and the photography is superlative! It's so good that the flowers literally drip off the pages capturing the imagination and the heart. If you want something special, are addicted to orchids and want to luxuriate in alorious

Was \$85:00 RRP (Ind. GST) PLUS POSTAGE AND HANDLING

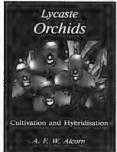
HUNTLEYAS AND RELATED ORCHIDS by Patricia A. Harding

Revered by avid orchid collectors for its delightful, star-shaped flowers, Huntleya is a small group of orchids found low in the forest. Huntleya is a small orchid genus that includes fourteen species. They occur in wet cloud forests at medium altitudes of Guatemala, Costa Rica, South America down to Bolivia. The type species Huntleya meleagris also occurs in Trinidad. Besides their striking colours - from deep blue to waxy red, royal purple to almost black flowers of this group are known for their distinctive shapes, patterns, and textures. As appealing as these lovely tropical orchids are, their identification has been

confused since the first species was described in the mid-1800s. Recent DNA studies have led to a clearer understanding of relationships and, as a result of this clarity, it is now possible to sort out the taxonomic problems and identify the characteristics that set species apart. In this first book devoted to the Huntleya alliance, author Patricia Harding presents evidence from the scientific literature, other growers, and her own experience that will enable orchid enthusiasts everywhere to identify their plants and grow them successfully. Patricia A. Harding is an accredited American Orchid Society judge who has been growing and photographing orchids for three decades.

260 pages, 150 colour photos. Hardcover.





Lycaste orchids are easy to grow, and they produce flowers that range from the beautiful to the bizarre. No book previously has provided detailed cultural requirements of the Lycaste, and this book should fill that gap, and encourage new growers to take up the cultivation of this beautiful genus. A section on hybridising contains valuable information on inheritance and genetics that will benefit any hybridiser, not just the grower of Lycastes, as well as helpful hints on how to avoid pitfalls in your hybridising program. Michael Hallett, a friend of

Fred Alcorn for a number of years, co-wrote this book with Fred and has completed it posthumously. He has a background in genetics, research and botany, and a passion for plants, especially orchids.

237 pages. Colour and B&W. was \$28.55 RRP (Incl. GST) PLUS POSTAGE AND HANDLING

GROWING BROMELIADS (3rd Edition)

by the Bromeliad Society of Australia

Many orchid growers also have a few "broms" in their collection and gardens. This is a revised 2006 edition of the highly successful book on growing and caring for bromeliads. This book was compiled and revised by experienced members of the Bromeliad Society of Australia.

Growing Bromeliads describes how and where to grow over 200 species and hybrids, and details ten of the most popular genera with brief notes on the more injuries, and betallisten of the most popular general most breat series in unusual genera. The main genera covered are: Aechmer, Ananas, Billbergia, Cryptanthus, Dyckia and Hechita, Guzmania, Neoregelia, Nidulanium, Tillandsia, and Vriesea, Descriptions of the native habitats for each of the ten genera are given, enabling you to provide the right growing conditions for any of these species within lhese genera. In total, over 400 species/hybrids are discussed.

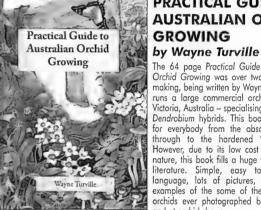
The book gives an interesting overview of the Bromeliad family, including a brief history of Bromeliad cultivation. There are also separate chapters on how to propagate these wonderful plants and on their unique botany. All of this is written in straightforward language with scientific terminology kept to a minimum. This new 128 page updated Third Edition includes: a new chapter on Australian hybrids; ten new species; new chemical treatment

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PRACTICAL GUIDE TO **AUSTRALIAN ORCHID** GROWING

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The title is somewhat misleading, as the text covers major cultivation principles for ALL orchid genera, not just the Australian native Dendrobium species and their hybrids. Topics covered (and illustrated) include Blooms, Starting a Collection, Housing Your Orchids, Day to Day Growing, Pests and Diseases, Physical Damage, Cymbidiums and Sarcochilus, plus Bits and Pieces (information about orchid propagation, orchid societies and deflasking.). This booklet is recommended for all new orchid enthusiasts, and all who want to brush up on their cultural skills and knowledge.

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SPATULATA ORCHIDS OF PAPUA NEW GUINEA

by Justin Tkatchenko and Steven Kami (featuring photographs by Rocky Roe)

his excellent A4 sized 96 page book is now out of print and we have secured the last few copies for our readers. It is not a scientific publication - but a very professional presentation - published by the Orchid Society of Papua New Guinea - showcasing the variety expressed within the native Spatulata Dendrobiums of Papua New Guinea. Over 100 colour photographs illustrate more than 30 species and colour variations. It also includes a number of newly discovered and currently undescribed species. The book includes distribution maps for each species and section a cultivation. distribution maps for each species and a section on cultivation, written by the local experts in their field. A required text for those interested in Dendrobiums, Orchids of PNG and tropical orchids

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August 17-19 St Ives Orchid Fair St Ives Showground, NSW

August 24-26 Victorian International Orchid Fair & Melbourne Orchid Spectacular — Keysborough, Vic

September 1-2 Dendrobium speciosum Spectacular – Kempsey, NSW

September 8-9 Cymbidium Orchid Society of Victoria - Wantirna, Vic

September 14-16 19th AOC Conference & Show - Perth, WA

September 20-22 Parramatta & District Orchid Society, Clivia & Spring Orchid Show - Winston Hills Mall, NSW

September 21-23 Queensland Orchid Society Brisbane Botanic Gardens, Mt Coot-tha, Qld

September 22-23 Mackay's Orchid Extravaganza, Orchid House @ Queens Park - Mackay, Qld

September 23 Hills District Orchids Spring Open Day - Northmead, NSW

September 27-30 Tasmanian Orchid Society, - Hobart Town Hall, Tas

September 29-30 Australasian Native Orchid Society VIC. Group

- Mt. Waverley Community Centre, Vic

October 5-7 Southern Orchid Spectacular

- Cronulla, NSW

November 3-4 Tweed Orchid Fair

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